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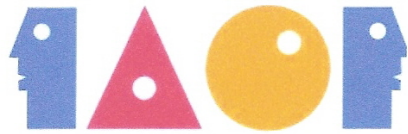
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An Empirical Study on the Relationship among Slack Resources, Resource Deployment, Turnaround Strategy, and Turnaround Performance

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Abstract

This study explores the relationship among organizational slack resources, resource deployment, turnaround strategy, and turnaround performance, employing sample companies that experienced turnaround situations during 1998-2010 from the Taiwan Economic Journal database. The empirical results herein show (1)slack resources negatively influence an efficiency-oriented strategy; (2)resource deployment has a positive influence on an efficiency-oriented strategy; (3)firms adapt an efficiency-oriented strategy has a negative impact on performance; (4)firms with higher variety in resources deployment, the utilization of a efficiency-oriented strategy deteriorated turnaround performance; (5)firm's specific factors have more impact on turnaround performance than do other variables.

Keywords: Turnaround Strategy, Organizational Slack Resource, Resource Deployment, Firm Specific Factors, Turnaround Performance

Introduction

It is ubiquitous that most companies have to face the situation of economic recessions and encounter poor performance during their organizational life cycle. Firms that have declined for several years are generally considered as representatives for a turnaround situation (Chen and Hambrick 2012; Ndofor et al. 2013; Schmitt and Raisch 2013). Chen (2015) emphasized that the operational definition of a declining situation - requiring a one-year swing from healthy profits to operating losses - does not mean that the problems confronting these companies were minor or necessarily short lived.

An unsuccessful reaction for coping with poor performance may lead firms to a difficult situation or even go into liquidation. Managers should thus conduct effective actions to prevent their firms from going out of business. A turnaround strategy is the solution for managers to implement when helping their firms to survive.

Different approaches of turnaround strategies have been discussed over the years. Some focus on the necessity of a turnaround strategy and the factors that accelerate the change of strategy (Schoenberg et al. 2013). Others put more efforts on how the turnaround occurred (Ahearne et al. 2014; Panicker and Manimala 2015) and the factors that restrict a turnaround (Bradley et al. 2011). However, there is still no consensus about which turnaround strategy is better than another one (Trahms et al. 2013).

Previous studies have made some assumptions about turnaround strategy and turnaround performance (Harker and Sharma, 1999; Sudarsanam and Lai, 2001; Barker and Mone, 1994). However, little research based on large samples and empirical approaches focus on the impact of slack resources, resource deployment, and firm specific factors in the relationship of turnaround strategy and turnaround performance. The main goal of this research is to explore the relationship between turnaround strategies and firm performance, especially for the impact of slack resources, resource deployment, and firm specific factors.

The Relationships Among Turnaround Strategy, Slack Resources, Resource Deployment, Firm Specific Factors, and Turnaround Performance

For firms that have experienced severely declining performance, managers and researchers regard this situation as reversible (Collett et al. 2014). In the early studies of the literature, researchers divided turnaround strategies into three main categories: cost reduction, growth or recovery strategies, and combined approaches. It is hard to classify a combination strategy into a definite strategy. Successful turnaround strategies rely on the causes of decline and the solutions that are customized in order to solve for different cases (Rasheed 2005). Previous scholars have presented different options for firms to revive themselves from poor financial performance due to diverse causes and the nature of the turnaround situation.

Rasheed (2005) explored the choice between growth and retrenchment under turnaround strategies for small business owners experiencing a decline in performance. His results indicated these contractors choose a growth strategy when their perceptions of resource availability and past financial performance are both high and when both are low. This indicates small business owner/ managers remain aggressive when faced with adverse conditions.

The focal point of other studies on turnaround strategies put more effort on different aspects. Previous studies on financial management and control recommended organizations to restructure debt or execute asset reduction (Chen and Hambrick 2012). Turnaround strategies recognized for their improvement on operations management include quality improvement, cost reduction, efficiency measures,

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and investment in R&D (Collett et al. 2014; Trahms et al. 2013). In the field of top management team and human resource management, organizational restructure, employee reduction, information dissemination, and culture building are the strategic options recommended to help companies during a declining situation and to put them on a path of stabilization and growth (Pajunen 2005).

To sum up, the main recommendation from prior studies can be categorized into two types of strategies: growth-oriented and efficiency-oriented (Hofer and Schendel 1978; Hambrick and Schecter 1983; O'Neill 1986; Pearce and Robbins 1993). Barker and Mone (1994) stated that firms conducting an efficiency- oriented strategy may not revive themselves from the decline. In other words, an efficiency-oriented strategy shrinks the scope of business or decreases the expenses of marketing and other costs, making organizations lose their profitable competency and speeding up the declining situation (Grinyer and Spencer 1979; Barker and Mone 1994). Conversely to efficiency-oriented strategies, growth-oriented strategies are much more successful in a company turnaround situation (Barker and Mone 1994; Harker and Sharma 1999; Sudarsanam and Lai 2001). As such, this study offers the following hypothesis.

Hypothesis 1: Different turnaround strategies selected lead to the different turnaround performance.

In light of theorists of the traditional organization approach, the preservation of slack resources is good behavior. When an organization has slack resources, managers are able to use those resources during a decline in business (Le Cottier and Santalo 2014; Xu et al. 2015). Slack resources can be regarded as a buffer system to alleviate the impact from an external recession. Researchers have proposed the following idea: Organizational slack is a kind of cushion, which consists of actual or potential resources that allow an organization to adapt successfully to internal or external pressures, such as policy changes or strategy changes relating to the external environment (Lecuona and Reitzig 2014; Marlin and Geiger 2015).

Slack organizational resources facilitate firms to eliminate inconsistency in their business goals (Marlin and Geiger 2015). The four major purposes for slack resources are: 1) motivations for firm actors to stay within the system; 2) a tool to reduce inconsistency of business goals; 3) a buffering mechanism in the workflow process; 4) a supporter of some strategic intention or inventive actions within the firm (Huang and Li 2012; Marlin and Geiger 2015; Mariadoss et al. 2014). Firms may endure threat- rigidity and have less flexibility to react to a decline when the organization lacks liquid resources as a buffer. Studies have found that threat-rigidity is a strong influence if firms are suffering from a drain of slack organizational resources (McKinley et al. 2014; Ndofor et al. 2013). Scholars have clearly suggested the importance of slack resources, and firms without enough slack resources could be less flexible in conducting strategic actions for which their performance will be affected. Hence, this study proposes the next two hypotheses as follows.

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Hypothesis 2: Slack organizational resources may positively affect turnaround strategies.

Hypothesis 3: Slack organizational resources moderate the relationship between turnaround strategies and turnaround performance.

Companies are internalized structures of resources deployment (Klein et al. 2013; Kozlenkova et al. 2014), with managers in the company trying to focus on maximizing shareholder value (Garzella and Fiorentino 2014; Hoenen and Kostova 2015). Under these circumstances, managers endeavor to increase the efficiency of resource allocation and decrease transaction costs in order to maintain sufficient returns to invested capital (Gentry and Shen 2013; Hoenen and Kostova 2015). To achieve this, resources must be allocated to units that can bring the most positive effects in an organization (Shinkle et al. 2013).

As Fombrun and Ginsberg (1990) pointed out, strategy represents the aggregation of longitudinal resource deployment. Scholars have defined several ways for resource deployment, and the most popular one is to define the relative aggressiveness in using and deploying resources (Romanelli 1986; Venkatraman and Grant 1986). Firms with higher aggressiveness in terms of resource deployment could move quickly into new products/markets, which will be reflected in their performance. Hence, this study offers the next hypotheses as follows.

Hypothesis 4: Resource deployment may have positive effects on turnaround strategies.

Hypothesis 5: Resource deployment moderates the relationship between turnaround strategies and turnaround performance.

The Present Study

The purpose of this study is to examine the influence of slack organizational resources, resource deployment, firm specific factors, and turnaround strategy on turnaround performance. The first condition for obtaining data is that the target firms must have experienced a turnaround situation. This study uses financial data to define organizations that had experienced a turnaround situation, in which at least two consecutive years of return on invested capital are below the average of each industry (Barker and Mone 1994). Taiwan Economic Journal's definition of return on invested capital is ROA (B): (Net Income-Exc Dispo/Total assets on average)*100.

Method

Participants and Procedure

The sample for this research was derived from the Taiwan Economic Journal database and is limited to listed companies. To be included in the sample, a firm must have been actively traded in the Taiwan stock market and experienced a turnaround situation during a 13-year period (fiscal years 1998-2010). The sample did not include firms' data for the year 2008, as such financial data might have been influenced by the global financial crisis. Taiwan Economic Journal yielded a potential sample of 593 firms. Firms with missing data or incomplete data were removed at initial screening, resulting in a sample of 355 companies.

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Measures

Turnaround Strategy

This study defines turnaround strategy into two main categories: efficiency-oriented and growth-oriented; efficiency-oriented means that firms are increasing their capabilities of cost control in order to stabilize operations; growth-oriented means the organizations conducted a market expansion, invested in new products, and diversified to stimulate growth (Collett et al. 2014; Tangpong et al. 2015; Trahms et al. 2013). We follow the study of Chen et al. (2014), in which the efficiency-oriented strategy us calculated by the average variation of operating expenses during a three-year period of the turnaround situation. On the other hand, the growth-oriented strategy is calculated by the average variation of sales per employee during a three-year period of the turnaround situation. If the data reveal that both strategies are qualified, then the level of percent change decides the strategic orientation.

Slack Resources

Slack resources in this research follow the measure in Bourgeois and Singh (1983). Bourgeois and Singh (1983) separated slack resources into three categories: available, recoverable, and potential slack. This research adopts the same measurement of slack resources into three main categories; for example, using the current ratio as the measurement of available slack and the accounts receivable-sales ratio to measure recoverable slack. The other one is potential slack, which is measured by the debt-equity-ratio. A firm with a high equity-to-debt ratio has a

relatively low ability to obtain additional funds through incurring debt and thus has little potential slack (Bourgeois and Singh 1983). The data obtained for slack resources in this study have adopted two time periods (2001-2005, one year before turnaround) and (2003-2007, one year after turnaround). The equation of slack resources is given as follows.

☐   Available slack resources = current ratio
☐   Recoverable slack resources = accounts receivable/sales
☐   Potential slack resources = equity-to-debt ratio

Resources Deployment

This study uses the measurement of resources deployment in Fombrun and Ginsberg (1990) and focuses on two kinds of resources deployment: variety in resources deployment and shifts in resources deployment. This study further uses three resource types to measure variety in resources deployment: R&D intensity (R&D expenditures/sales), capital intensity (capital expenditures/sales), and advertising intensity (advertising expenditures/sales). This research picked three consecutive years (1998- 2005) of information for each turnaround period. For the measurement of the variety in resources, this study adopts the coefficient of variation (σ/mean) across the three areas to realize the varieties (Dooley et al. 1996) and then averages the results from each resource to get the varieties in each firm. For shifts in resources deployment, this study uses the proportion of the three resource types for an estimate. Here, it is Ra/RTL, where Ra is the dollar amount allocated to the resource types, and

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RTL is the total amount of dollar spent on the three resource types (R&D, capital, and advertising).

We then calculate the absolute differences in the proportions of allocations to all three resource types across the two time periods. There are five turnaround periods in this study and hence five different periods of data provided: t1 (1998-2000) and t2 (1999-2001); t1 (1999-2001) and t2 (2000-2002); t1 (2000-2002) and t2 (2001-2003); t1 (2001-2003) and t2 (2002-2004); and t1 (2002-2004) and t2 (2003-2005).

Next, this research operates the data computed above through the following formula:

$$\left| (Ra/RTL)\, t1 - (Ra/RTL)\, t2 \right|.$$

The measurement of shifts in resource deployment also follows the study of Fombrun and Ginsberg (1990).

Firm Specific Factors

Several control variables are included in the model, and the first is organization age. Levinthal (1991) suggested that there is a relationship between the age of an individual organization and the likelihood of survival. Older organizations tend to exhibit higher mean performance, greater reliability in their performance, and higher levels of inertia in their behaviors. This study adopts the measurement suggested by Kelly and Amburgey (1991), which is the year of turnaround minus the organization's founding year.

The second variable is firm size. Scholars building upon Schumpeter's classic arguments suggested that large firms are more capable of obtaining radical innovations, enjoy economies of scale in research and development, spread risks widely, and have greater access to market and financial resources (Forés and Camisón 2016). This study follows the measurement of Barker III et al. (2001), who provided the number of employees during one year before turnaround as the measurement of organization size.

We also control market position, in which firms possessing greater market position leads to adequate resources for strategic changes (Schoenberg et al. 2013). Companies with adequate resources could have more chances to achieve better turnaround performance. Market position is measured by total revenue and market share (Schoenberg et al. 2013). Therefore, this study first acquires the total revenue one year before firms experienced a turnaround situation and then computes the data to a standardized score for each industry. If the numbered results are positive, then it shows that the firm has a higher market position than other firms in the industry. However, a negative number reveals information that the companies possess a lower market position.

Better turnaround performance can be traced back to better prior performance. Better prior performance can be regarded as a firm's internal abilities, and firms with better internal capabilities have more resources to operate on strategic changes (Díaz-Fernández et al. 2016). Thus, prior performance is also our control variable. Prior performance is

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measured by the four-year ROA average before firms experienced the turnaround (Wiseman and Bromiley 1996).

Turnaround Performance

Turnaround performance can be measured by four consecutive years of revenue variation (Kesner and Dalton 1994). Companies with successful turnaround performances show growth in net profit for three consecutive years. Another definition of a successful turnaround performance is when return on investment (ROI) and return on sales (ROS) have risen above average and keep growing for two consecutive years after a turnaround situation (Robbins and Pearce 1992). This study uses the averages of ROI, ROS, and ROA (B) for three consecutive years to measure turnaround performance.

Results

Descriptive Statistics and Correlations

Table 1 provides the correlation matrix and descriptive statistics for all variables. An examination of the correlation matrix reveals that some predictor variables are significantly correlated with each other. Thus, multicollinearity should further be inspected by VIF.

Hierarchical Regression

The Impacts of Slack Resources, Resource Deployment, and Firm Specific Factors on Turnaround Strategies

Table 2 reports the results of the influence of firm specific factors, slack resources and resources deployment on turnaround strategies in terms of efficiency-orientated strategy (EO) and growth-orientated strategy (GO). The values presented in the table are standardized coefficients.

EO: Model 1 of the hierarchical regression includes firm specific factors; in model 2 of the hierarchical regression, organizational slack resources are added; the third block includes the resources deployment. R^2 values for the three models are 0.002, 0.02, and 0.038. The influences of age, size, market position, and prior performance were not statistically significant in the model, and the P value of model 1 was greater than 0.05, indicating that the influence of firm specific factors on an efficiency-oriented turnaround strategy was not evident. Organizational slack resources were added to the second block, and only the predictive power of available slack resource was statistically significant ($\beta=-.149$, $t=-2.223$, $p<0.05$). In model 3, resources deployment was added. An influence of shifts in resources deployment on advertising expenditure ($\beta=0.135$, $t=1.861$, $p<0.1$) was found, indicating the more resources shifted toward advertising expenditure, the more likely an efficiency-oriented strategy will be adopted.

GO: Model 1 of the hierarchical regression included firm specific factors; in model 2 of the hierarchical regression, organizational slack resources were added; the third block included resources deployment. The R^2 values for the three models were 0.018, 0.025, and 0.047. Age was found to be statistically significant ($\beta=-0.121$, $t=-2.706$, $p<0.05$), revealing that a sample organization with older age tends to adopt a growth-oriented strategy when a decline occurs.

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The Impacts of Turnaround Strategies, Slack Resources, Resource Deployment, and Firm Specific Factors on Turnaround Performance

Table 3 shows the results of the influence of organizational slack resource and turnaround strategies on turnaround performance in terms of ROS. The values reported in the table are standardized coefficients. In model 1 of the regression model, organization size (β=-0.167, t=-2.464, p<0.05) and prior performance (β=0.329, t=6.058, p<0.05) were found to have a strongly positive influence on turnaround performance in terms of ROS.

When turnaround strategies were added into model 2, an efficiency- oriented strategy (β=-0.124, t=-2.289, p<0.05) was found to have a positive influence on turnaround performance in terms of ROS. When organizational slack resources were added into model 3, available slack resource (β=-0.108, t=1.654, p<0.1) was found to have a positive impact on turnaround performance in terms of ROS. Model 4 added the moderator effects between slack resources and turnaround strategies. A moderator effect of a growth-oriented strategy and available slack resource (β=-0.131, t=-1.947, p<0.1) was found. When moderator effects between turnaround strategies and resource deployment were further added to model 6, a moderator effect of the variety of resource deployment was found (β=-0.108, t=-1.890, p<0.1).

Table 4 shows the results of the influence of organizational slack resource and turnaround strategies on turnaround performance in terms of ROI. In model 1 of the regression model, organization age (β=-0.133, t=-2.506, p<0.05), size (β=0.254, t=3.840, p<0.05), market position (β=-0.133, t=-2.000, p<0.05) and prior performance (β=0.327, t=6.179, p<0.05) were found to have strong positive influences on turnaround performance in terms of ROI. When turnaround strategies were added into model 2 and model 3 and model 4, no significant influence was found.

When resource deployment was added into model 5, shifts in resource deployment in R&D expenditure (β=0.101, t=1.775, p<0.1) was found to have a positive impact on turnaround performance in terms of ROI. Table 5 shows the results of the influence of organizational slack resource and turnaround strategies on turnaround performance in terms of ROA. In model 1 of the regression model, organization age (β=-0.151, t=-2.903, p<0.05), size (β=0.287, t=4.433, p<0.05), and prior performance (β=0.343, t=6.620, p<0.05) were found to have a strong positive influence on turnaround performance in terms of ROA.

When organizational slack resources were added into model 3, available slack resource (T+1) (β=0.107, t=1.704, p<0.1) and recoverable slack resource (β=-0.106, t=-1.986, p<0.05) were found to have a positive impact on turnaround performance in terms of ROA. When resource deployment was added into model 5, shifts in resource deployment in R&D expenditure (β=0.122, t=2.191, p<0.05) were found to have a positive impact on ROA. When moderator effects between turnaround strategies and resource deployment were further added to model 6,

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Table 1 Descriptive statistics and bivariate correlations of all variables

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1.	Age	-0.002	0.906																			
2.	Size	0.000	0.905	.084																		
3.	MP	-0.075	0.659	.123*	.605**																	
4.	PP	0.010	0.895	-.090	.028	.059																
5.	EO	-0.015	0.876	.002	.041	.027	.003															
6.	GO	-0.021	0.847	-.119*	-.048	-.003	.007	.137*														
7.	PS(T-1)	-0.010	0.896	.011	.065	.094	-.264**	.044	.030													
8.	AS(T-1)	0.009	0.887	-.070	-.066	-.067	.268**	-.132*	-.057	-.477**												
9.	RS(T-1)	0.019	0.907	.039	-.131*	-.250**	-.174**	-.029	-.070	-.041	.104											
10.	PS(T+1)	-0.013	0.902	-.021	.040	.051	-.235**	.024	-.017	.740**	-.405**	.036										
11.	AS(T+1)	0.023	0.908	-.092	-.162**	-.125*	.254**	-.115*	-.008	-.474**	.580**	.018	-.514**									
12.	RS(T+1)	0.030	0.901	.053	-.106	-.200**	-.105	-.002	-.059	.022	.134*	.713**	.118*	.081								
13.	ROS-P	0.016	0.880	-.066	.126*	.038	.333**	-.116*	-.005	-.151*	.207**	-.157**	-.218**	.211**	-.123*							
14.	ROI-P	-0.005	0.906	-.158**	.172**	.023	.339**	-.017	-.022	-.070	.066	-.145*	-.120*	.197**	-.118*	.673**						
15.	ROA(B)-P	-0.005	0.898	-.169**	.232**	.089	.360**	-.034	-.005	-.116*	.088	-.188**	-.181**	.180**	-.154**	.788**	.845**					
16.	VIRDep.	-0.012	0.888	-.147*	-.108	-.095	-.264**	-.015	.055	.104	-.033	-.100	.014	.065	-.104	-.009	.012	-.041				
17.	shifts-adv.	-0.005	0.877	.006	-.072	-.015	-.113*	.051	-.019	.083	-.019	-.024	.059	.035	.012	.009	.017	-.001	.299**			
18.	shifts-R&D	-0.017	0.887	-.096	-.024	.021	.006	-.069	.133*	.011	-.004	-.117*	-.028	.091	-.069	.069	.114*	.139*	.086	.189**		
19.	shifts-Cap	-0.019	0.875	.048	-.057	-.008	-.029	-.050	.081	.101	-.051	-.068	.023	.025	-.010	.024	.049	.047	.307**	.591**	.358**	

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2 Hierarchical regression analysis - turnaround strategies

	Model 1						Model 2						Model 3					
	EO	GO	EO	GO	EO	GO	EO	GO	EO	GO	EO	GO	EO	GO	EO	GO	EO	GO
	Beta		Tolerance		VIF		Beta		Tolerance		VIF		Beta		Tolerance		VIF	
Age	-.001	-.121**	.975	.975	1.025	1.025	-.007	-.119**	.968	.968	1.033	1.033	-.008	-.112*	.918	.918	1.090	1.090
Size	.040	-.071	.634	.634	1.578	1.578	.035	-.072	.633	.633	1.581	1.581	.035	-.067	.627	.627	1.595	1.595
MP	.003	.056	.626	.626	1.596	1.596	-.004	.036	.594	.594	1.684	1.684	-.006	.037	.591	.591	1.692	1.692
PP	.001	-.005	.987	.987	1.013	1.013	.035	.003	.857	.857	1.167	1.167	.046	.001	.771	.771	1.297	1.297
PS(T-1)							-.020	.001	.745	.745	1.342	1.342	-.019	-.002	.738	.738	1.355	1.355
AS(T-1)							-.149**	-.062	.734	.734	1.363	1.363	-.154**	-.060	.728	.728	1.374	1.374
RS(T-1)							-.004	-.059	.889	.889	1.125	1.125	-.014	-.041	.852	.852	1.173	1.173
VIRDep.													-.006	.022	.764	.764	1.309	1.309
shifts-adv.													.135*	-.108	.628	.628	1.593	1.593
shifts-R&D													-.057	.098	.846	.846	1.183	1.183
shifts-Cap													-.111	.099	.552	.552	1.811	1.811
R	0.042	0.133					0.143	0.159					0.195	0.217				
R2	0.002	0.018					0.02	0.025					0.038	0.047				
Adjusted R2	-0.012	0.004					-0.003	0.002					0.002	0.011				
F	0.132	1.338					0.88	1.098					1.044	1.31				
Sig.	0.971	0.256					0.523	0.364					0.408	0.218				

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3 Hierarchical Regression Analysis - ROS

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF
Age	-.041	.975	1.025	-.039	.961	1.040	-.033	.943	1.061	-.033	.920	1.087	-.018	.910	1.099	-.032	.881	1.136
Size	.167**	.634	1.578	.173**	.631	1.585	.189***	.621	1.610	.1857**	.606	1.649	.185**	.625	1.600	.194**	.607	1.648
MP	-.077	.626	1.596	-.077	.625	1.600	-.084	.604	1.657	-.080	.599	1.669	-.082	.623	1.606	-.087	.603	1.659
PP	.329***	.987	1.013	.329***	.987	1.013	.272***	.898	1.114	.276***	.888	1.126	.358***	.899	1.112	.345***	.856	1.169
EO				-.124**	.979	1.022	-.109**	.965	1.037	-.095*	.913	1.095	-.124**	.957	1.045	-.115**	.947	1.056
GO				.013	.963	1.038	.007	.960	1.042	.017	.920	1.087	.008	.933	1.071	.005	.889	1.125
PS(T+1)							-.090	.691	1.448	-.089	.685	1.460						
AS(T+1)							.108*	.660	1.516	.111*	.637	1.569						
RS(T+1)							-.087	.904	1.106	-.085	.889	1.124						
PS_EO										.071	.682	1.466						
AS_EO										.041	.626	1.598						
RS_EO										-.035	.923	1.083						
PS_GO										-.099	.638	1.567						
AS_GO										-.131*	.618	1.617						
RS_GO										.009	.919	1.088						
VIRDep.													.083	.788	1.269	.072	.773	1.294
shifts-adv.													.056	.615	1.625	.058	.603	1.658
shifts-R&D													.059	.843	1.186	.067	.815	1.227
shifts-Cap													-.042	.549	1.821	-.051	.531	1.885
Var._EO																-.108*	.891	1.122
Var._GO																.047	.768	1.302
Shifts.adv_EO																-.028	.625	1.599
Shifts.adv_GO																-.039	.459	2.179
Shifts.RD_EO																-.058	.839	1.192
Shifts.RD_GO																-.002	.708	1.412
Shifts.Cap_EO																.071	.591	1.692
Shifts.Cap_GO																.011	.405	2.467
R	0.361			0.381			0.423			0.44			0.397			0.419		
R2	0.13			0.145			0.179			0.194			0.158			0.175		
Adjusted R2	0.119			0.128			0.154			0.152			0.129			0.123		
F	11.198			8.421			7.123			4.607			5.481			3.366		
Sig.	0.000			0.000			0.000			0.000			0.000			0.000		

* p< .05, ** p< .01, *** p< .001.

Table 4 Hierarchical Regression Analysis - ROI

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF
Age	-.133**	.975	1.025	-.137**	.961	1.040	-.119**	.943	1.061	-.122**	.920	1.087	-.114**	.910	1.099	-.109**	.881	1.136
Size	.254	.634	1.578	.253***	.631	1.585	.276***	.621	1.610	.275***	.606	1.649	.267***	.625	1.600	.266***	.607	1.648
MP	-.133**	.626	1.596	-.131**	.625	1.600	-.147**	.604	1.657	-.147**	.599	1.669	-.138**	.623	1.606	-.159**	.603	1.659
PP	.327***	.987	1.013	.327***	.987	1.013	.285***	.898	1.114	.279***	.888	1.126	.356***	.899	1.112	.361***	.856	1.169
EO				-.020	.979	1.022	-.002	.965	1.037	.007	.913	1.095	-.012	.957	1.045	-.007	.947	1.056
GO				-.026	.963	1.038	-.029	.960	1.042	-.034	.920	1.087	-.042	.933	1.071	-.031	.889	1.125
PS(T+1)							.039	.691	1.448	.035	.685	1.460						
AS(T+1)							.168**	.660	1.516	.170**	.637	1.569						
RS(T+1)							-.102*	.904	1.106	-.099*	.889	1.124						
PS_EO										.087	.682	1.466						
AS_EO										.051	.626	1.598						
RS_EO										-.006	.923	1.083						
PS_GO										-.082	.638	1.567						
AS_GO										-.026	.618	1.617						
RS_GO										.037	.919	1.088						
VIRDep.													.090	.788	1.269	.083	.773	1.294
shifts-adv.													.028	.615	1.625	.042	.603	1.658
shifts-R&D													.101**	.843	1.186	.114**	.815	1.227
shifts-Cap													.000	.549	1.821	-.002	.531	1.885
Var._EO																.001	.891	1.122
Var._GO																.089	.768	1.302
Shifts.adv_EO																-.043	.625	1.599
Shifts.adv_GO																.049	.459	2.179
Shifts.RD_EO																.039	.839	1.192
Shifts.RD_GO																-.070	.708	1.412
Shifts.Cap_EO																.013	.591	1.692
Shifts.Cap_GO																-.110	.405	2.467
R	0.415			0.417			0.448			0.458			0.442			0.462		
R2	0.172			0.174			0.200			0.210			0.195			0.213		
Adjusted R2	0.161			0.157			0.176			0.168			0.168			0.164		
F	15.568			10.400			8.187			5.093			7.103			1.292		
Sig.	0.000			0.000			0.000			0.000			0.000			0.000		

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 5 Hierarchical Regression Analysis - ROA

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF	Beta	Tolerance	VIF
Age	-.151**	.975	1.025	-.152**	.961	1.040	-.143**	.943	1.061	-.138**	.920	1.087	-.137**	.910	1.099	-.132**	.881	1.136
Size	.287***	.634	1.578	.288***	.631	1.585	.304***	.621	1.610	.314***	.606	1.649	.299***	.625	1.600	.300***	.607	1.648
MP	-.086	.626	1.596	-.085	.625	1.600	-.099	.604	1.657	-.099	.599	1.669	-.094	.623	1.606	-.109	.603	1.659
PP	.343***	.987	1.013	.343***	.987	1.013	.293***	.898	1.114	.292***	.888	1.126	.356***	.899	1.112	.357***	.856	1.169
EO				-.043	.979	1.022	-.029	.965	1.037	-.013	.913	1.095	-.032	.957	1.045	-.026	.947	1.056
GO				-.006	.963	1.038	-.012	.960	1.042	-.009	.920	1.087	-.024	.933	1.071	-.025	.889	1.125
PS(T+1)							-.054	.691	1.448	-.053	.685	1.460						
AS(T+1)							.107*	.660	1.516	.119*	.637	1.569						
RS(T+1)							-.106**	.904	1.106	-.102*	.889	1.124						
PS_EO										.054	.682	1.466						
AS_EO										.070	.626	1.598						
RS_EO										.023	.923	1.083						
PS_GO										-.087	.638	1.567						
AS_GO										-.082	.618	1.617						
RS_GO										-.014	.919	1.088						
VIRDep.													.037	.788	1.269	.028	.773	1.294
shifts-adv.													.020	.615	1.625	.027	.603	1.658
shifts-R&D													.122**	.843	1.186	.130**	.815	1.227
shifts-Cap													.013	.549	1.821	.015	.531	1.885
Var._EO																-.021	.891	1.122
Var._GO																.098*	.768	1.302
Shifts.adv_EO																-.035	.625	1.599
Shifts.adv_GO																-.006	.459	2.179
Shifts.RD_EO																.032	.839	1.192
Shifts.RD_GO																-.003	.708	1.412
Shifts.Cap_EO																.024	.591	1.692
Shifts.Cap_GO																-.089	.405	2.467
R	0.456			0.458			0.488			0.497			0.479			0.492		
R2	0.208			0.21			0.238			0.247			0.230			0.242		
Adjusted R2	0.197			0.194			0.214			0.208			0.203			0.194		
F	19.606			13.135			10.191			6.305			8.729			5.053		
Sig.	0.000			0.000			0.000			0.000			0.000			0.000		

* p< .05, ** p< .01, *** p< .001.

a moderator effect was found (β=0.098, t=1.660, p<0.1), indicating the variety of resource deployment positively impacts the relationship between an efficient-oriented strategy and ROA.

Discussion

Conclusions and Managerial Implications

This research presents that the impact of an efficiency-oriented strategy on performance is negative in terms of ROS. This result is similar to the finding of Barker and Mone (1994), indicating that efficient-oriented strategy may not be very effective under a declining situation.

For the relationships between slack resources and turnaround strategy, AS was found to have a negative influence on an efficiency-oriented strategy. Although the impacts of PS and RS on an efficiency-oriented strategy were not statistically significant, their direction is also negative. Jensen (1986) suggested slack resources encourage inefficiency, politics, and self-serving behaviors. The results of this study support this point of view. When excess slack resources are available, managers will try to protect personal interests and turn away from an efficiency-oriented strategy.

For the relationship between resource deployment and strategy, we find that increasing advertising expenditure positively influences an efficiency- oriented strategy. The forming of a strategy is the aggregation of resources deployment (Fombrun and Ginsberg 1990).

Advertising expenditure intends to stimulate sales in order to survive during a decline, but the operating expenses or budget of a firm are usually fixed or at a certain proportion of sales revenue. Under a declining situation, a drop in sales revenue is usually followed by cuts in the budget or operating expenditure. In this case, if a firm continuously increases investment in advertising, then there is less it can spend on R&D or capital expenditure. Consequently, the chances of developing any new products could be minimized and sales revenue will decrease. As a result, budget cutting is inevitable and the crystallization of an efficiency-oriented strategy cannot be avoided.

Regarding the moderate effects of resources deployment on turnaround strategies and turnaround performance, our study finds that the variety of resource deployment has negative effects on the relationship between an efficiency-oriented strategy and ROS. The reason could be that the variety of resource deployment will harm the effectiveness of efficiency-oriented strategy, consequently affected the profitability of turnaround performance. Organization age was found to be negatively related to turnaround performance, perhaps because older age firms might have built-in routines that cause inertia and reluctancy to change. Thus, they have problems adjusting when the environment change, and performance will be affected.

Organization size was found to be positively related to turnaround performance. A large organization usually indicates more resources, such as more tal-

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ents, more financial power, and greater R&D capability. Those abundant resources more easily and smoothly help a company overcome a decline. The sample firms' prior performance was found to have a very strong positive impact on turnaround performance. Prior performance can be regarded as a firm's internal capabilities, and similar to company size, prior performance could also be a kind of resource. The implication is that firms have to possess resources whenever they can, because no manager knows the exact time for when to use those resources.

Market position is negatively related to ROI, which means firms with a lower market position tend to have a higher rate of ROI. It might be Taiwan-listed firms with a lower market position like to adopt a flexible strategy when facing an economic recession, which could subsequently lead to better performance. According to the research results, a firm's specific factors have more impact on turnaround performance than do other variables. Hence, this study deduces that firm specific factors play an important role when the sample companies were conducting turnaround strategies during a decline.

Research Limitation and Future Suggestions

The major research limitation of this study is the lack of updated qualitative research aspects during a firm's turnaround situation. This empirical study's data were obtained from Taiwan Economic Journal's database, where the information is more objective,

and it is difficult to understand whether the information was refined or not. Future studies can investigate selected industries and conduct interviews with managers to realize the real difficulties on turnaround strategy adoption and on the use of slack resources. The sample companies of this study were those firms experiencing a turnaround situation during a 13-year period (1998-2010). Future research could add a specific time period into the study, like the year 2008, to see the pattern of a firm's resource deployment and the use of slack resources when encountering a severe economic slowdown. This study also focused on Taiwan-listed firms. Future studies could compare some selected industries to understand whether various business domains act differently or not when facing a decline in performance.

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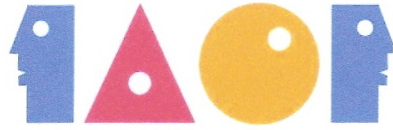
REVITALIZATION STRATEGIES FOR ABANDONED SUGAR FACTORY SITES IN TAIWAN

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Abstract

For a historical building, reuse is one design strategy within urban revitalization. Adaptive reuse of industrial heritage is a more complicated issue. Resource management in the sphere of building and landscape that uses conservation criteria and processes outline as its first tool should be targeted. A particular industrial history can be told appropriately on the site itself without necessarily implying its literal representation. Many unused industrial buildings, such as mining sites, sugar factories, wine factories and electronic factories have involved in different types of redevelopment plan all over Taiwan. The present study evaluates design strategies that might use to reclaim abandoned sites in urban areas transforming them for the society and the environment. That strategy related to the socio-cultural character. The objective of the present work was to analyze the design strategies used in the revitalization of abandoned industrial areas using one specific case study: Ciaotou Creative Park in Taiwan.

Keywords: revitalization, adaptive reuse, abandoned sugar factory, strategies

(Editors Note: See pictures of the abandoned sugar factories at the end of this article.)

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Introduction

The adaptive reuse of abandoned industrial area buildings has received a lot of attention in the past few years and has become a major landscape related problem (De Sousa, 2002). Since the mid-1980s, policy makers and planners have paid significantly more attention to the sustainable development and have improved the quality of life in urban areas. The redevelopment of abandoned industrial area sites, which are often located in the core sections of urban areas or sites of high ecological value as rivers are prime targets for urban revitalization (Brooks, 2006).

In the past, industry often abandoned without performing the appropriate revitalization work. Today, with the increased ability of perturbation that affect large portions of the landscape, there is a deep public concern that industry should not be abandoned without performing any revitalization work. New design strategies to reclaim abandoned industrial sites have devised in recent years, focusing on the sustainability, quality and multi-functionality of the space, with attention to historic, socioeconomic and cultural aspects.

In post-industrial city, "frozen landscapes" emerge because of far -reaching structural changes to region that formerly dominated by heavy industry. Today, different creations of those abandoned lands have used to drive the restoration of the degraded landscapes in cities used to be the industrial heartland. Some extraordinary projects such as Emscher park in Ruhr , 798 art district in Beijing and High line in New York City played a very important role as a renaissance in their neighborhoods, and the city as a whole. They have become "a symbol as well as a stimulus for urban, economic, social, and environmental change." (Brown, 2001) Thus, a greater potential for urban-industrial wastelands and corresponding activities by local people has arisen all around the world.

To develop innovative strategies for abandoned industrial land was a main goal of city planners. Many conceptual approaches aimed at providing the following functions in the post-industrial urban landscape (Dettmar, 2005):
• Compensation function for the balance of nature
• Protection of species, biotopes, and creation of a 'preserve' for endangered species Political-pedagogical function
• Experience of nature and open space for town dwellers
• Preservation and transformation of industrial-cultural landscapes
• Variety and beauty
• Ecology and aesthetics
• Process observation

The importance of abandoned industrial land as an abiotic and especially as a biotic resource has demonstrated in several studies (Dettmar, 2005). However, less knows about the other functions and their potential for cultural activities of the local population.

Recently many landscape architects have begun to look at the landscape not only as a setting in which to intervene, inserting an indefinite variety of

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objects, but as a tool through which to design and manipulate complex material. The understanding of the temporal and dynamic character of any landscape and design solutions, as well as a design process that facilitates a fair representation of the existing attitudes towards and expectations of the site, is paramount for success (Langhorst, 2004).

The landscape transforms into something different, a place sensitive to different transformations, which records the movements and events that cross it. Artists were the first to begin to transform this sensitive surface, seeking a type of formal assimilation for everyday use. Architects, as a result, attempt to define, using the same approach, a method capable of reacting and integrating the life of man and the spaces that protect him (De Sousa, 2002).

Rather than treating industrial area sites as problems, many cities have now come to recognize the several advantages that come from redeveloping such sites (Brooks, 2006; Thomas, 2002). Pediaditi et al. (2006) emphasize the need to adopt a holistic approach when assessing sustainability by considering social, environmental and economic issues.

This paper focuses on the changing of how local people perceive, adapt and use the new nature that arises on abandoned industrial land, especially the relationship between the cultural activity and the place over time. This present work also analyzes one specific case that represent different types of strategies that may be used in the revitalization of abandoned industrial areas, focusing on sites that incorporate a significant amount of public open space: Ciaotou Creative Park (Taiwan, R.O.C.).

Design strategies in sustainable landscape revitalization

In order to create a successful and sustainable revitalization design, it is important to recognize and interpret the historic and cultural significance of the landscape and to understand how "landscape ecology and design can invent alternative forms of relationships between people, place, and cosmos. So that landscape architectural projects become more about invention and programs rather merely corrective measures of restoration" (Corner, 1996). Any attempt to define principles for good design must embody the principles of sustainable development. Building design, landscape design and urban design must bring together to deliver a more integrated, skilled and effective design process.

According to Punter (2002), landscape revitalization design should integrate five fundamental principles: protect and conserve quality landscapes; develop a clear vision and strategy for an area; apply collaborative design principles; allow resources for long-term aftercare of new landscapes; enhance biodiversity, social stability and economic development.

The industrial building revitalization design should integrate similar five fundamental principles. First, perform well the functions for which they are redesigned; Second, be long lasting and

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adaptable to new uses; Third, respond well to their surroundings and enhance their context; Forth, have a visual coherence and create 'delight' for users and passers-by; Fifth, be sustainable – non polluting, energy efficient, easily accessible and have a minimal environmental impact (Punter, 2002).

However, it is clear, that the analysis and recovery of this landscape constitutes an opportunity that tends to be lost in time, considering the growing urban pressure leading to the disappearance of various industrial infrastructures, some with heritage value and significant relevance at local and national level, little has been done in order to conserve and rehabilitate (Loures and Panagopoulos, 2007).

Socio-cultural character: the case study of Ciaotou Creative Park

The vision for Ciaotou Creative Park revitalization project, Figure 1, is to establish a new sustainable landscape built on the achievements of the past with innovations solutions. Whereas, figure 2 to 4 illustrates the outlook of the Ciaotuo sugar factory area.

The park is part of a 2300-acre redevelopment, the so-called Kaohsiung Sugar Cultural Park, carved from a former sugar refinery factory, and pieces of the larger site will commercially develop to help fund the park. The Dutch, who influenced the island during the 1630s, primarily introduced sugar to Taiwan. Though the Dutch soon forced off the island, growth in sugar production continued to grow eventually booming in

the early 18th century. Taiwan's sugar farms and mills were small-scale operations and continued to be, making it hard to keep up with industry pricing. The southern sugar growing regions lagged behind the northern rice growing regions due to this lack of development. When the Japanese asserted control Ciaotou Creative Park over the island in 1895, they set to modernizing Taiwan's sugar industry. Centered in the southern sugar growing region, the Ciaotou Creative Park was built in 1901 as Taiwan first modern sugar refinery. Without modernization of the supply chain, Taiwanese sugar was still not competitive on the world market and mostly sold duty-free to Japan. In 1946, with return of sovereignty, all of the various sugar companies in operation merged to form the Taiwan Sugar Corporation. Sugar regained the top spot as Taiwan's export in the '50s and '60s but then falling back as Taiwan developed manufacturing industries and became a less agrarian economy, eventually leading to the closure of the Ciaotou Creative Park in 1999. The current incarnation of the Taiwan Sugar Corporation (TaiSugar) is still in business, but diversified into tourism, floriculture, biotechnology, retail, and real estate.

The Ciao-Tou Sugar Factory, located in Kaohsiung, has a complex that includes a production area (the factory), the storage area (the warehouses), administration building (offices), and a large complex of accommodations for both Japanese and Taiwanese factory staff, including a school. It was designated as the fifth Cultural Landscape in 2007. The local society and the Taiwan

Sugar Corporation chose to concentrate their attention on the listed building for further adaptation as a museum and offices. Multifunctional and experimental site-based civic organizations and design companies rose to the challenge to find the potential of this area. The preservation and adaptive reuse of residential housing and the Guest House has been carried out to extend the scope of industrial heritage resources, and an art gallery and venue for civic activities (auction, workshop, brand shop, café, restaurant, community event, and summer camp) have enlivened the rundown side of the Ciao-Tou Sugar Factory. This is one example where heritage has been actively challenged to produce sustainable uses by entrepreneurs. The entrepreneurs have introduced cultural consumption into industrial heritage, leading to the realization of the recovered historical traces via different approaches, for example the curatorial remit of the galleries, on-site-conservation of lease area, catering facilities, and civic activities. Curatorial involvement from social professionals in the Ciao-Tou Sugar Factory has threatened the static attitude of the ownership of Taiwan Sugar Corporation (Lin, 2015).

Curatorial resources based cross-regionally have raised the identity and consciousness of lo- cal communities. Both Bywood and the Hangen Architectural Studio as curatorial institutions are extending the resources industrial heritage can provide, looking at the cultural potential of heritage as a brand image rooted in the historical value of the past. This has been assisted by the existing transportation system that has links be-

yond the boundaries of the region. It has been mutually beneficial for commerce and conservation, entrepreneur and industrial heritage, as well as a collaboration between cross region resources and the stakeholders for the sustainable use of industrial heritage. It represents a classic case of the entrepreneur involved in heritage management and adaptive reuse of residential housing whose success reveals the indecisiveness of the managing strategy of government. At the other end of the Ciao-Tou factory area are the preserved production facilities and accompanying spaces, such as offices and the main factory building. This has become a museum of the sugar industry, with additional exhibition spaces. However, the majority of the area has been given over to the operational management of the site, and this has led to a variety of functions and uses with very little connection between the individual management of the eating places, one-off events, and shops. This has resulted in a series of functions that are irrelevant to the historic and cultural past and that are unique to this industrial heritage site (Lin, 2015).

One of the main objectives of the Ciaotou Creative Park was the establishment of a project that integrates social, economic, and environmental issues in the development of a sustainable park (Czerniak, 2001).

Ciao-Tou Sugar Factory stopped processing sugar in the mid 1980s. Even though it was situated at the core of the developing transportation axis during the years of disuse, the meaning of the existence of the Ciao-Tou Sugar Factory site

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also changed. The Ciao-Tou Sugar Factory and the surrounding areas went through re-construction, including its spatial form which shifted dramatically and the abandoned residential houses provide urgent scope for reuse. The local NGO on the culture and history of Ciao-Tou, the Ciao-Tou Society of Cultural and History (CTS) was established to link heritage resources and the local community as early as 1994, before manufacturing actually stopped (Lin, 2015).

Developing the architectural approach, particular emphasis has given to innovation in design and environmental sustainability, together with wider re-generation benefits, linking convincingly the terms city, landscape and architecture. Public participation played a crucial role in the success of the revitalization project (De Sousa, 2003). Those project innovations suggest how it is possible to reclaim abandoned land, minimizing the intervention costs, by creating socio-cultural conditions that not only favor those spaces, but also reinforce their sustainability. The Ciaotou Creative Park revitalization project is one of the best examples of socio-cultural design strategy in landscape revitalization.

Conclusion

It can conclude that the involvement of communities in the whole redevelopment process is crucial, in both the short and long term. Municipal departments implicated in the administration of parklands should consult and involve directly in all greening projects of aban-

doned land. Potential funding sources must identify. Abandoned land inventories need to establish in local and national level and used to find where greening opportunities exist.

The case study presented make it obvious that the redevelopment of industrial area sites constitutes a valuable opportunity for increasing green spaces in urban areas and, thus, bringing about benefits such as soil quality improvement, habitat creation, recreational opportunity enhancement and economic revitalization of neighborhoods. Diverse design strategies should use in revitalization of abandoned industrial areas according to their potential, but independently from the design strategy that may be used; the spirit of the place should be seen as the essential theoretical base for landscape revitalization allowing to strengthen the landscape most important aspects and to accomplish sustainable development.

For the renewal of industrial parks in the future, the sustainable environmental development should be the basic consideration. When it comes to the renewal policies and approaches, there are development aspirations such as the sustainable use of land, the strengthening of resource recycling and recovering, and the enhancement of promotion of green energy industries such that more efforts of sustainable operation can devote to land and environment during industrial development.

This research focused on the debate over the transformation of sugar factories built in the colonial period in

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Taiwan and how they function in new ways as creative cultural parks. This can be achieved by interweaving local resources with the physical industrial heritage properties and creative industry in order to promote the sustainable and creative life of the industrial heritage. To conclude, with the problems currently being faced in adaptive reuse for industrial heritage, it is necessary to continue to examine issues of historic value and local resources. This should focus on their role and characteristics as well as conserve the value of industrial past, so that the enhancement and production of creative use will be connected with local community (Lin, 2015).

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A century-old Banyan tree provides open space shelter	bomb shelter
Red brick water tower	Bridge first sugar mill village.
Chungshan Hall ice cream sale	Holiday plazza crowd
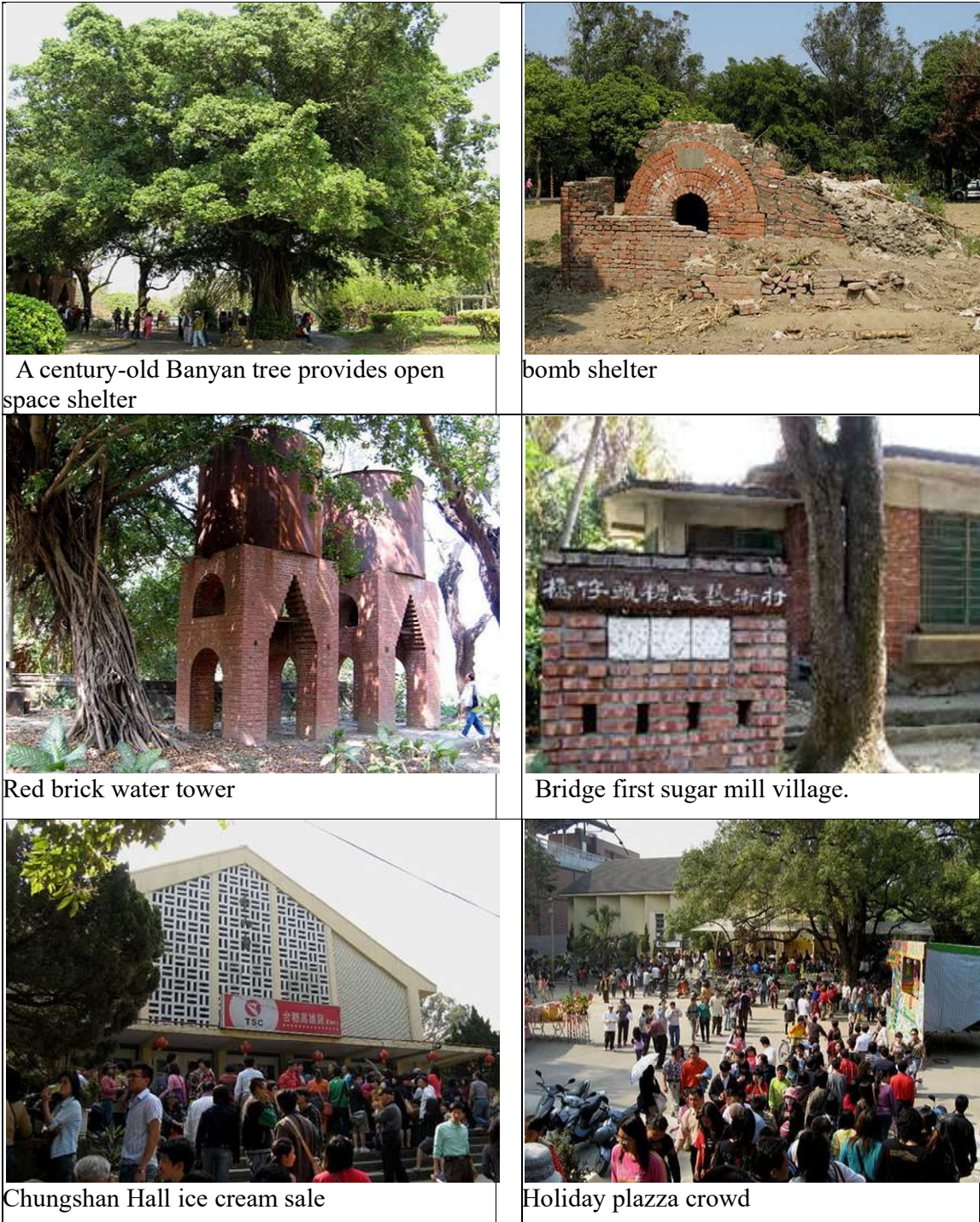
Figure 4. Ciaotuo sugar factory area map No.3

Data source：http://tw.myblog.yahoo.com/jw!LSOKnM2cFQAzLNqQTSDE/article?mid=11551

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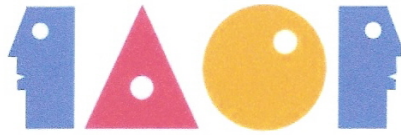
THE STUDY OF THE EMPATHY ITEMS IN SERVQUAL SCALE FOR MEASUREMENT INVARIANCE ACROSS GENDER

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Abstract

The most well-known SERVQUAL Scale has been recognized a successful instrument for evaluating service quality in current marketing research. However, the measurement invariance issues in SERVQUAL have received very few considerations. Some studies also suggested there were the significant relationship between gender issue and perception of service quality. The main purpose of this quantitative study was to test the measurement invariance for the part of Empathy in SERVQUAL Scale for retail chain stores business in Taiwan. The sample in this research was selected as customers from four retail chain stores in Taiwan, resulting in 200 individual surveys for analysis. The results indicated the Taiwan version of Empathy 3-item scale achieved strict measurement in-

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variance across gender groups, while the models of factor loading, structural covariances and measurement residuals across gender were invariant. Finally, this research generated the proposals for retail chain stores business in Taiwan and recommended future scholar studies.

Key Words: service quality, SERVQUAL, empathy, measurement invariance, retail chain stores, Taiwan

Research Background and Theoretical Foundation

Deming (1981) and Garvin (1987) identified the service quality was the perception of individual satisfaction for matching the customers' demand. Garvin (1987) also indicated the consumer's perception of service quality was recognized by subjective judgment which was different to the perception of tangible product management. The well known SERVQUAL Scales was created by Parasuraman, Zeithaml, and Berry (1988). This questionnaire tries to explore the differences between anticipation and awareness on a number of particular criteria in service quality. The SERVQUAL Scales suggested five dimensions to evaluating the perception of service quality, such as tangible, responsiveness, reliability, empathy, and assurance. Since service quality has been described as the critical factor to sustain the proficiency for business development, the SERVQUAL has become the most popular instrument for measuring the perception of service quality. Bolton and Drew (1991) developed a model to test the impacts of a service change on consumer attitudes about service quality.

The results revealed service changes were indentified to powerfully impact consumer evaluations if service quality through their effect on consumer awareness of current concert and disconfirmation. Even though this questionnaire has applied broadly to perform studies for service quality in industries or countries, very few studies have examined the issues of the measurement invariance for SERVQUAL Scale. In addition, numerous researchers (Baird 1976, Blustain 2000, Canary and Hause 1993) have suggested theories for gender difference in numerous facets on psychology and manner, such as social talents, communications, work approaches and so on.

People also have paid much attention on the issue of the increasing woman buying power for those years, and the studies for gender differences in consumer behavior have become important topic for current academy researcher and marketing administrators in business. Research by Meyers-Levy and Maheswarm (1991), and Mitchell and Walsh (2004) revealed gender differences will lead to different buyer behaviors. Mitchell and Walsh (2004) also claimed gender differences resulted in different decision making processes. These theories and studies suggested that there was the significant relationship between gender and service quality. Hu (2014) conducted a study to examine the measurement invariance across gender in the version of the part of Tangibles in

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SERVQUAL Scale for retail chain stores business in Taiwan. The results indicated the Taiwan version of Tangible 5-item scale only achieved partial measurement invariance. However, in another study, Hu, Liu, Su and Huang (2016) conducted a research to examine the measurement invariance across gender in the version of the part of Responsiveness in SERVQUAL Scale. The results indicated the Responsiveness 5-item scale achieved strict measurement invariance across gender. These results explained the measurement invariance across gender for SERVQUAL Scale maybe differently depends on individual items. Current researches need to develop more studies to verify how measurement invariance across gender issues effect the SERVQUAL Scale. Therefore, this research expanded previous research and applied SEM approach to evaluate the measurement invariance across gender for the component of Empathy in SERVQUAL Scale in chain restaurant business of Taiwan.

Research Purposes and Hypotheses

Following the theory concept as stated, the purposes and the significance for this research were: (a) to examine the measurement invariance for the part of Empathy in SERVQUAL Scale in retail chain stores business of Taiwan, (b) to generate the proposals for managerial applications of retail chain stores business, and (c) to suggest areas for future scholarly inquiry. The proposed methods for assessing measurement invariance across groups differ from researchers to researchers (Vandenberg & Lance, 2000). Byrne (2010) suggested the tests for multigroup invariance were: (a) fac-

tor loadings, (b) factor covariances, and (c) structural regression paths. Following this concept, the researcher proposed three hypotheses as follows.

Hypothesis 1: Assuming measurement weights for three empathy items are invariant for gender groups.

Hypothesis 2: Assuming structural covariance for three empathy items are invariant for gender groups.

Hypothesis 3: Assuming measurement residuals for three empathy items are invariant for gender groups.

Methodology

The three items of Empathy in this research were little modified from the SERVQUAL Scales (Parasuraman et al, 1988). Following Five Likert Scale: strongly disagree, disagree, neutral, agree, strongly agree, the five items were: (a). Service person won't ignore my request even though in busy status. b). Service person take care customers' interest first., c). Service person understand the needs of customers. Previous studies by Hu (2011, 2012, and 2013) have demonstrated the validity and reliability for this scale were reasonable and acceptable. The customers from four retail chain stores in the Kaohsiung city of south Taiwan attended this research. The pretest was conducted with Item Analysis in 50 samples. The researcher applied the method of random sampling. Each store randomly invited

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volunteer customers who shopping in stores to participate the questionnaire survey. The total number of valid responses was 200 (not including 15 invalid response), providing an adjusted response rate of 93%.

Jöreskog (1971) recommended the first step to measure the equality of covariance structure was the test of null hypothesis. The groups were considered to have equivalent covariance structures if H_0 cannot be rejected. Jöreskog (1971) also suggested the group data should perform the signal group tests first as group data were considered to have equal covariance indexes. Thus, conducting a configurable test was necessary to verify if males and females shared the similar indicators for model fit. If this occurred, configurable invariance would exist and follow up invariance analyses were unnecessary. However, Marsh and Hocevar (1985), and Byrne, Shavelson, and Muthén (1989) argued the strict invariance requirement was typically hard to satisfy. If the testing results cannot meet the strict invariance requirements, a small portion of non-invariant items will not affect the comparisons for all groups in invariant measurement level, and the researchers were not necessary to conduct individual item test. Moreover, Cheung and Rensvold (2002) suggested other statistic methods to test the between-group invariance of CFA models, such as the statistics of △CFI, △Gamma hat, and △McDonald's NCI criteria were utilized.

Analysis of Results

The Structure Equating Modeling (SEM) by Analysis of Moment Structure (AMOS) software was applied to test the model structure and hypotheses in this study. The factor analysis for three empathy items for males and females were showed as Figure One and Figure Two. The results of multi-sample analysis for the unconstrained and the three constrained models were listed as Table one. The unconstrained model showed an acceptable baseline model for both males and females. The multi-sample analysis also showed the indexes of model fit for three constrained models (measure weights, structural covariances, and measurement residuals) across gender, and these indexes indicated the three constrained models were accepted.

The test results for nested model comparisons were showed in Table Two. The χ_2 difference test ($\chi_2(4)= .030$, p>.05) between baseline model and constrained model for measurement weights was not significant, indicating the factor loadings across gender in this scale were invariant, and Hypothesis 1 was not rejected. In addition, the result of the χ_2 difference test between baseline model and constrained model for structural covariances ($\chi_2(2)=.882$, p>.05) was not significant, indicating that, aside from the factor loadings, structural co variances of this scale was invariant across the gender and Hypothesis 2 was not rejected. Finally, the result of χ_2 difference test for measurement residuals ($\chi_2 (6) = 2.140$, p>.05) was not significant, indicating the
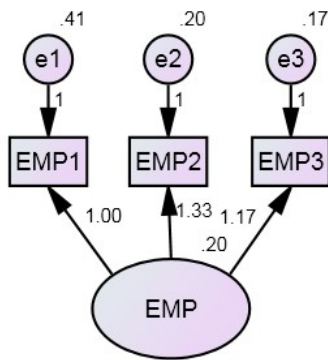
Chi-square=3.053 degree of freedom=12
normed chi-dquare=.254
GFI=.993 AGFI=.990 CFI=1.000
RMSEA=.000

Figure 2. Factor Analysis for Empathy Items for Female Group
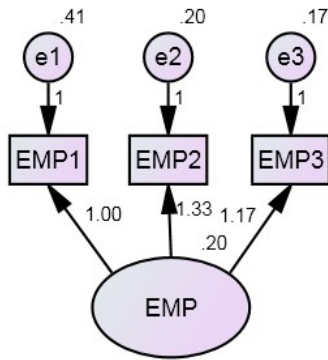
Chi-square=3.053 degree of freedom=12
normed chi-dquare=.254
GFI=.993 AGFI=.990 CFI=1.000
RMSEA=.000

Table 1. Model Fit Indexes for Unconstrained and Constrained Model

Model	χ^2	DF	P	χ^2/DF	GFI	AGFI
Unconstrained	.000	0			1.000	
Measurement weights	.030	4	1.000	.007	1.000	1.000
Structural covariances	.912	6	.989	.152	.998	.994
Measurement residuals	3.053	12	.995	.254	.993	.990

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Table 2. Nested Model Comparisons

Model	DF	χ2	P
Measurement weights	4	.030	1.000
Structural covariances	2	.882	.643
Measurement residuals	6	2.140	.906

measurement residuals across gender in this scale were invariant, too. Therefore, all three null hypotheses were not rejected in this research.

Conclusions and Suggestions

The results indicated this Taiwan version of Empathy 3-item scales of SERVQUAL Questionnaire achieved strict measurement invariance across the gender, including invariance of factor loadings, structural covariances and measurement residuals. The results were consistent with the study by Hu et al. (2016) and indicated the Responsiveness 5-item scale achieved strict measurement invariance across gender. However, the results did not consist with the views of Meyers-Levy and Maheswarm (1991), and Mitchell and Walsh (2004)

suggested gender differences will lead to dissimilar buyer actions. Although this model was fully measurement invariance, Milfont and Fischer (2010) claimed full measurement invariance is questionable to hold in reality.

Based on the research by Hu (2014), the part of Tangibles in SERVQUAL Questionnaire is partial measurement invariance across the gender. Those studies revealed the researcher should keep strict manner to conduct research for multiple items in questionnaire for the issues of measurement invariance across group. And this study suggested the part of Empathy in SERVQUAL Scale was measurement invariance across genders. Scholars may apply these items for conducting studies for service industry, specially exploring the service quality issues for the retail chain store business in Taiwan.

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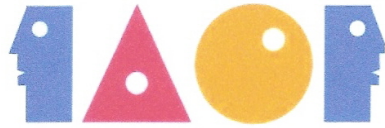
A DESCRIPTIVE STUDY OF HEALTH BEHAVIORS IN TAIWAN'S SUBSTITUTE MILITARY SERVICE

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Abstract

In Taiwan, young men are required to serve compulsory military services. In 2000, after reviewing various civilian service systems of European countries, Taiwan developed a Substitute Military Service for those compulsory solders who either have health problems or special family conditions. One of the criteria for entering this system is the Body Mass Index (BMI) of physical status. The influence of BMI on health status has been studied extensively. However, since the implementation of this Substitute Military System, there has been no research on the health status of this group of young men. Hence, the purpose of this study was to investigate the health behaviors of the young men in the Substitute Military System in Taiwan. This paper utilized the physical examination results of these young men to collect information on their heights and weights. In addition, a questionnaire was distributed. A total of 1,643 questionnaires were collected. BMI, morbidity, substance abuse, and self-evaluation of health were analyzed. Health behaviors, including exercise, smoking, and betel nuts chewing, and health status satisfaction were further examined. The results of this research will provide information on the health management and improvement programs.

Keywords: Health Behaviors. Taiwan's Substitute Military Service.

Introduction

Young men in Taiwan are required to serve compulsory military service. For soldiers with either health problems or special family conditions, Taiwan developed a Substitute Military Service based on a 2000 review of European civilian service systems. One of the criteria for entering this system is the body mass index (BMI) within 29-32.

The influence of BMI on health status has been studied extensively. However, since the implementation of this Substitute Military System, no research has examined the health status of this group of young men. Hence, the purpose of this study was to investigate the health status of young men in the Substitute Military System in Taiwan. In particular, we asked the following healthy behaviors. The results of this research will provide information for health management and improvement programs.

Literature Review

Healthy behaviors are those performed by a person without any illness and prevent disease. The health behaviors (Liou & Lu, 2006) can be classified into three groups: (1) daily habits, including smoking, drinking alcohol, eating fruits and vegetables, and exercise, (2) using relevant health services, including medical examination, cervical Pap smear test, cancer screening tests, etc., and (3) behaviors under special circumstances such as not fastening the seatbelt while driving and drunk driving. Healthy and dangerous behaviors usually co-exist and constitute more complex behavior patterns called lifestyle. A study indicated the positive correlation between health concept and healthy lifestyle among college students. Huang (1998) discussed the prediction factors in promoting healthy lifestyle among college students in the general south area and found that health behavior self-efficacy, health concept, and gender were factors that predict health- promoting lifestyles. Many studies conducted in developing countries showed positive correlation between obesity and socio-economic variables. Tsou (2003) conducted estimates of obesity among men and women and discovered that age and education level were two significant variables in women, whereas in men, their significance was not obvious.

In a study to determine if people in Taiwan had a correct self-perception of body type, Chen et al. (2003) found that according to BMI measurements, men who participated in health examinations had a higher prevalence of obesity than women. However, based on waist circumference, women had a higher prevalence of obesity than men. Chen et al. recommended using a combined measurement of BMI and waist circumference, instead of a single measurement, to properly assess obesity and body status. The ideal BMI of Taiwanese people is 22 (Department of Health, R.O.C., 2008). Thus, a Taiwanese person can determine ideal body weight by squaring their height and multiplying by 22. One is overweight if the body weight exceeds 10% of the ideal body weight ($24.2 < BMI < 26.4$), and obese if actual body weight exceeds 20% of the ideal weight ($BMI > 26.4$).

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Obesity is an important issue worldwide because it has been consistently and strongly associated with coronary heart disease, stroke, diabetes, and malignant tumors. The prevalence rates of obesity and overweight in Taiwanese men are 10.0% and 22.8%, respectively (Department of Health, 2008). Possible causes of obesity include excessive calorie intake, lack of exercise, genetics, and socio-economic status. Most smokers of light cigarette brands are men (90.8%), 51.7% of whom are between 35 to 64 years old (Taiwan Bureau of Health Promotion, 2008). A relatively large part of the 51.7 % comprises people with at least a college education (22.8%) and those with a high school diploma (6.6%). In terms of health condition and smoking characteristics, 90.9% of smokers of light cigarette brands believed they enjoyed favorable health (Lin, 2007). Many of them had smoked into their adult years ever since elementary school or high school. When asked to reflect on why they smoked, 70.9% said they smoked because they felt lonely and bored, and 58.3% said they smoked when they were with friends (Huang, 2003). Smoking not only is one of the common causes of early onset and preventive diseases but also one of the causes of lung and other forms of cancer as well as coronary heart disease.

In North America, smoking increases mortality rate of early onset diseases by 20 to 60%, those who had been chronically exposed to tobacco smoke had a higher chance of contracting lung cancer, and the causes of smoking among youngsters included constant exposure to tobacco commercials, the emu-lation of adult behavior, and the desire of reflecting certain social status.

In Taiwan, more than 10% of teenage students have once chewed betel nuts. Betel nut chewing is slowly invading campuses, and the age of betel nut chewers is dropping. According to the 2007 report by the Department of Health, R.O.C. on the ten common causes of death, the number of men who die of oral cavity cancer rose gradually. In 2007, oral cavity ranks number five of the ten common causes of death. As the statistics revealed, the number of oral cavity cancer deaths had increased from 3.9% to 5.8% of total cancer deaths, and what is noteworthy is that the number of deaths per 100,000 people had climbed from 9 to 9.6. (Department of Health, R.O. C., 2007) While deaths of other forms of cancer occur in elderly people, a high percentage of oral cavity cancer deaths are among people who age from 25 to 45.

In terms of sports and recreation, in 2001, estimated 21.0% of the adult population in Taiwan exercised regularly, 28.6 % exercised irregularly and 50.3% were never engaged in any kind of sports. 18.6% of the male population had exercised regularly before 25. And men aged between 25 and 44, preoccupied with building a career and starting a family, had the lowest participation rate in any kind of sports. Based on the 2002 report of the Bureau of Health Promotion, R.O.C., the number one reason for not exercising among men and women was "lack of time," followed by reasons such as "physical strength and endurance," "work as exercise," and "family factors." Many studies have shown that

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physical activities not only can improve the quality of life but also have positive correlation to the physiological health. Physiologically, hose who exercise regularly have enjoyed far better health than those who don't. (Lin et al., 2007) Years of unhealthy behavior has resulted in the increasing incidence of chronic diseases. In the 1970s, researchers had found unhealthy behavior led to chronic diseases, and in Taiwan, many of them are closely related to long-term habits of smoking, alcohol use and low exercise frequency. Smoking, alcohol use and betel nut chewing—all of them are substance use behaviors—are the three most common dangerous health behaviors in Taiwan as well as the main causes of mortality and incidence of diseases. These three substance use also showed signs of clustering (Chen et al., 2003) In other words, many of those who smoke also habitually drink alcohol and chew betel nuts. These unhealthy hobbies are the main causes of many preventive and early onset diseases. Exercise is an energizing, positive and beneficial health behavior which has been shown to help lower blood pressure, reduce the incidence of high blood pressure, and coronary heart disease (Chen et al., 2003). Health-promoting programs are the major strategy to prevent chronic disease, and moderate exercise can not only increase coronary blood flow volume, cardiac output, muscle tone, immunity but also reduce stress, build confidence, stabilize emotions, and improve the quality of life.

Substitute Service draftees, who are still in their early twenties, often resort to negative ways to deal with their stress and pressure, and consequently, un-

healthy habits such as smoking, drinking or drug abuse are formed. Many scholars have agreed that health promotion is a combination of general concepts which are influenced by factors such as cognitive styles, family, economy, society, and culture (Li, 2004). As for personal characteristics, experience, and socio-demographic features, they include gender, age, academic performance, living condition, family social status, and self-perceived health status. Life experience consists of family illness (parents, grandparents or siblings with heart disease, diabetes or high blood pressure), family members hospitalized in the past three years and the use of health-related resources on campus. Synthetically speaking, health perception evaluation looks at four aspects: clinical health concept, role performance, adaptive health behavior, and feelings of euphoria and well-being. Each aspect has the following components: (1) clinical health concept, (2) role performance health, 3) adaptive health, and (4) feelings of euphoria and well-being. Clinical health concept refers to no symptoms of illness, no need for a doctor's appointment, no need to use any medication, and no signs of any mental or physical discomfort.

Role performance health means the ability to perform daily tasks, to live a creative life, to achieve one's goals, to live to one's satisfaction, and to take daily responsibility for oneself as a family member, a friend, and an employee. Adaptive health refers to the ability to adapt to changes in life and in one's surroundings, to deal with stress and pressure, and to know one's limits and adapt to circumstances. Feelings of euphoria and well-being mean a sense of well-

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being and of living a solid and fulfilled life, high anticipation for the coming of each new day, the ability to reach one's highest potential, the ability to behave in a way that meets one's expectations, physical and mental health in optimal condition, the ability to continue to learn, the ability to think and handle problems and challenges with maturity, and willingness to share and to live in harmony with others.

Risky health behaviors can be divided into three categories: (1) accident injuries (driving without buckling up, riding with a drunk driver, running through red lights, and riding a motorcycle with a helmet); (2) alcohol and inappropriate substance use (smoking, drinking, using substances such as amphetamines and Ecstasy); and (3) dietary behaviors (eating regular meals, a daily balanced in-take of items from five major food groups, and avoiding junk food such as desserts, cake, and chips).

Methodology

This study utilized the physical examination results of these young men to collect information on their heights and weights in 2009 to 2010. A questionnaire was distributed. A total of 1,643 questionnaires were collected, the majority (58.4%) of those interview aged between 21 and 25, and the second largest group (33.7%) aged between 18 and 20. In terms of education level, 0.1% was illiterate, 0.2% had elementary education, 12.1% had junior high education, 35.7% had senior high education, 40.7% had college education, and 11.1% had post-graduate education. With regard to marital status, 81.2 % of the subjects were unmarried, 1.4% were married, and 17.4% were single. With reference to occupation, 14.6% of the interviewed were unemployed and 40.3% were students, who were the majority among the subjects. The bulk of the study subjects of the current study were newly graduates; as a result, the result also focused on the unemployed and students.

Results

BMI and Health Condition

The largest proportion of study subjects was overweight (based on BMI, 45.8 %), with 32% underweight, and 22.2% normal. The prevalence of overweight in our sample was 13% higher than the reference of 32.8%. This discrepancy is due to our subjects being Substitute Service draftees, who were assigned to this service exactly because their health status was inferior, accounting for their having a higher BMI.

Correlation was also found among education level, health condition self-evaluation, health satisfaction, and peer comparison of health condition in different demographic characteristics. Regarding education level, the higher the education level was, the higher percentage of normal BMIs there was. The percentage of each education level is as follows: 0% among the illiterate, 0.3% among those with elementary education, 7.5% with junior high education, 25.1% with senior high education, 45.7% with college education, and 21.4% with post-graduate education. The data indicated that the higher education level a subject had, the more equipped the subject was with health-related knowledge and in-

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formation and the better judgment the subject was capable of making pertaining to medical care and related information so as to make decisions accordingly to promote health. In terms of self-evaluation, it showed that in self-evaluation, most of the subjects who considered their health condition good, believed they had a very similar health condition when compared with peers, and were ok with their health. This result is the same as that of other studies because the study subjects were all adolescents, whose health condition was excellent and most of whom were free of any illnesses and as a result the self-perceived health status was better. Among the Substitute Services draftees, 32.0% had an underweight BMI, 22.2 % normal, and 45.8% overweight.

Table 1. Cross-analysis of the health self-evaluation and BMI

BMI		Underweight	Normal	Overweight
Self-evaluation	Good	14.6	17.2	11.5
	Average	67.1	65.7	64.8
	Poorer	18.3	17.2	23.7
Peer comparison	Better	3.3	4.7	3.6
	Average	69.9	73.7	63.4
	Poorer	26.8	21.6	33.0
Health satisfaction	Satisfied	15.7	18.9	12.1
	Average	61.6	60.8	60.6
	Unsatisfied	22.6	20.3	27.3

Note: Unit: Percentage.

Table 1 shows a cross analysis of health condition self-evaluation and BMI. Among those who had an underweight BMI, 16.4% of them perceived their health as good, 67.1% average and 18.3% poor. Among those who had a normal BMI, 17.2% perceived their health as good, 65.7% average and 17.2% poor, whereas among those who had an overweight BMI, 11.5% of them perceived their health as good, 64.8% average and 23.7% poor. It can be deduced that regardless of BMI, the majority of the Substitute Services draftees evaluated their health as average and the second highest percentage of them poor.

Among those with an underweight BMI, 3.3% considered their health to be better than their peers, 69.9% neither better nor poorer and 26.8% poorer. Among those with a normal BMI, 4.7% considered their health condition better than their peers, 73.7% neither better nor poorer and 21.6% poorer while among those with an overweight BMI, 3.6% considered their health better than their peers, 63.4% neither better nor poorer and 33% poorer. In a nutshell, regardless of BMI, more than half of Substitute Services draftees, compared with their peers, considered their health average. 15.7% of those with an underweight BMI were satisfied

with their health, 61.6% found their health to be average, and 22.6% were unsatisfied. Among those with a normal BMI, 18.9% were satisfied with their health, 60.8% found their health to be average, and 20.3% were unsatisfied, while 12.1% of those with overweight BMI were satisfied with their health, 60.6% found their health to be average, and 27.3% were unsatisfied. As a whole, Regardless of BMI, most of the subjects responded an average satisfaction with their health.

Factors of Health Behaviors

Scholars also pointed out that smoking and drinking shows signs of clustering. (Chen et al., 2003) In other word, many of those who smoke also engage in drinking behavior. Change might take place as age increases; therefore, getting rid of unhealthy health behaviors is the best way to improve health condition. As for substance abuse, among those who were engaged in substance abuse, a much lower percentage were found either to have an average satisfaction with their health or to be unsatisfied with their health than those who did not engage in substance use. This indicated that substance abuse does not increase health satisfaction. And in terms of exercise, those with higher exercise frequency were found less likely to be unsatisfied with their health; those who exercised one to two times per week were found to show the highest percentage of people who perceived their health as good.

Table 2 provides a cross analysis of education level and habits. Among those who did not engage in alcohol abuse behavior, none of them was illiterate, 0.1% had an elementary education, 9.4% had a junior high education, 33.7% had a senior high education, 44.1% had a college education and 12.5 % had a post- graduate education. Among those who were engaged in alcohol abuse, 0.4% were illiterate, 0.9% had an elementary school education, 27.9% had a junior high education, 48.2% had a senior high education, 20.4% had a college education and 2.2% had a post-graduate education. It can be deduced from Table 2 that the higher the education level is, the lower the prevalence of alcohol abuse and the more highly personal health condition is valued. Among the Substitute Services draftees who did not engage in betel nut chewing behavior, none were illiterate, o.3% had an elementary education, 9.4% had a junior high education, 34.7% had a senior high education, 43.7% had a college education, and 12% had a postgraduate education. Among draftees who did not engage in betel nut chewing behavior, more than half had a college education, and the second largest group was those with a senior high education. Among draftees who were engaged in betel nut chewing behavior, 0.9% was illiterate, 45.3% had a junior high education, 48.7% had a senior high education and 5.1% had a college education. This shows those with a junior and senior education had the highest prevalence of betel nut chewing behavior.

Once addicted to smoking, alcohol abuse, or betel nut chewing, one can soon be found addicted to all of the three behaviors. The earlier the engagement in any of these three behaviors takes place, the harder it is to quit. Betel nut chewing

is also found to be addictive like tobacco and alcohol. (Huang et al., 1996) The consumer group of tobacco, alcohol and betel nuts has been expanding to include adolescent consumers. Among these three behaviors, betel nut chewing is unique part of Taiwanese culture. Because of its detrimental impact on health, further research on related factors of smoking, drinking, and betel nut chewing behaviors is vitally necessary.

Table 2. Cross-analysis of the educational level and habit

Education level		Illiterate	Elementary	Junior high	Senior high	College	Post gradu-ate
Alcohol abuse	NO	0	0.1	9.4	33.7	44.1	12.5
	YES	0.4	0.9	27.9	48.2	20.4	2.2
Betel nut chewing	NO	0.01	0.3	9.4	34.7	43.7	12.0
	YES	0.9	0.01	45.3	48.7	5.1	0.01
Exercise frequency	0 time	0.2	0.2	15.8	41.0	34.9	7.9
	1-2 time	0.01	0.2	7.7	28.7	48.6	14.8
	3-5 time	0.01	0.01	4.9	34.1	44.7	16.3
	>5 times	0.01	0.01	7.1	42.9	35.7	7.1

Note: Unit: Percentage.

Table 3 provides a cross analysis of alcohol abuse, smoking, betel nut chewing and health self-evaluation. Among those who were not engaged in smoking behavior, 14.7% perceived their health as good, 65.7% average and 19.7% poor. Among those who were engaged in smoking behavior, 12.3% perceived their health as good, 65.6% average and 22.1% poor. In another word, engaged in smoking behavior or not, the majority of the draftees perceived their health as average and the second largest group perceived their health as poor. Among those who were not engaged in smoking behavior, 15.6% were satisfied with their health, 59.5% had an average satisfaction with their health and 25.0% were unsatisfied. Among those who were engaged in smoking behavior, 12.3% were satisfied with their health,

63.3% had an average satisfaction with their health and 23.2% were unsatisfied. From Table 3, we can infer that engaged in smoking behavior or not, the majority of the draftees had an average satisfaction with their health.

Among those who were not engaged in alcohol abuse behavior, 14.2% perceived their health as good, 65.7% average and 20.1% poor. Among those who were engaged in alcohol abuse behavior, 10.6% perceived their health as good, 65.9% average and 23.5% poor. Engaged in alcohol abuse or nor, the majority of the draftees perceived their health as average and the second largest group perceived their health as poor. Among those who were not engaged in alcohol abuse behavior, 15.3% were satisfied with their health, 60.3% had an

Table 3. Cross-analysis of the health self-evaluation and alcohol abuse,
smoking, betel nut chewing

Alcohol abuse		NO	YES
Health condition	Good	14.2	10.6
	Average	65.7	65.9
	Poor	20.1	23.5
Health satisfaction	Satisfied	15.3	11.7
	OK	60.3	65.0
	Unsatisfied	24.4	23.3
Smoking		**NO**	**YES**
Health condition	Excellent	14.7	12.3
	Good	65.7	65.6
	Poor	19.7	22.1
Health satisfaction	Satisfied	15.6	12.3
	OK	59.5	63.3
	Unsatisfied	25.0	23.2
Betel nut chewing		**NO**	**YES**
Health condition	Good	13.7	14.3
	Average	66.4	58.0
	Poor	19.9	27.7
Health satisfaction	Satisfied	14.9	13.8
	OK	60.6	64.7
	Unsatisfied	24.5	21.6

Note: Unit: Percentage.

Table 4. Cross-analysis of the health exercise frequency,
diseases and health condition

Exercise frequency		0 time	1-2 time	3-5 time	>5 time
Health condition	Excellent	31.3	50.5	16.2	2.3
	Good	52.9	38.9	7.3	0.9
	Poor	72.0	25.2	2.7	0.01
Health Satisfaction	Satisfied	38.8	44.3	13.9	3.0
	Normal	52.6	40.1	6.6	0.7
	Unsatisfied	66.1	28.2	5.7	0.01
The number of detected diseases		**None**	**1-2 type**	**>3 types**	
Health condition	Excellent	86.0	13.5	0.5	
	Good	77.2	22.5	0.3	
	Poor	64.4	34.4	1.2	
Health satisfaction	Satisfied	86.5	12.7	0.8	
	Normal	78.4	21.4	0.2	
	Unsatisfied	62.5	36.5	1.0	
BMI	Underweight	81.0	18.8	0.2	
	Normal	73.0	26.2	0.8	
	Overweight	74.1	25.4	0.5	

Note: Unit: Percentage.

average satisfaction with their health and 24.4% were unsatisfied. Among those who were engaged in alcohol abuse behavior, 11.7% were satisfied with their health, 65.0% had an average satisfaction with their health and 23.3% were unsatisfied. Thus, it can be inferred that whether engaged in alcohol abuse behavior or not, the majority of the draftees had an average satisfaction with their health and the second largest group were found unsatisfied with their health.

Among those who were not engaged in betel nut chewing behavior, 13.7% perceived their health as good, 66.4% average and 19.9% poor while among those who were engaged in betel nut chewing behavior, 14.3% perceived their health as good, 58.0% average and 27.7% poor. Hence, whether engaged in betel nut chewing behavior or not, the majority of the Substitute Services draftees perceived their health as average and the second largest group perceived their health as poor. Among those who were not engaged in betel nut chewing behavior, 14.9% were satisfied with their health, 60.6% had an average satisfaction with their health and 24.5% were unsatisfied whereas, among those who were engaged in betel nut chewing behavior, 13.8% were satisfied with their health, 64.7% had an average satisfaction with their health and 21.6% were unsatisfied. Therefore, it can be inferred that whether engaged in betel nut chewing behavior or not, most of the Substitute Services draftees had an average satisfaction with their health.

Table 4 provides a cross analysis of the health exercise frequency, diseases and health condition. Among those who

perceived their health condition as good, 31.3% were not engaged in any exercise, 50.5% 1 to 2 times a week, 16.2% 3 to 5 times a week and 2.3% more than 6 times a week. Among those who perceived their health as average, 38.9% exercised regularly 1 to 2 times a week, 7.3% 3 to 5 times a week and 0.9% more than 6 times a week, while, among those who perceived their health as poor, 66.1% were not engaged in any exercise, 8.2% exercised 1 to 2 times a week and 5.7 % exercised 3 to 5 times a week and none exercised more than 6 times a week. From Table 4, it can be concluded that draftees who perceived their health as good exercised regularly at least 1 to 2 times a week whereas the majority of the draftees who perceived their health average or poor did not exercise at all. Among those who were satisfied with their health, 38.8% did not exercise at all, 44.3% exercised regularly 1 to 2 times a week, 13.9% exercised regular 3 to 5 times a week and 3% exercised more than 6 times a week. Among those who had an average satisfaction with their health, 52.6% did not exercise at all, 40.1% exercised regular 1 to 1 times a week, 6/6% exercised 3 to 5 times a week and 0.7% exercised more than 6 times week, while among those who were unsatisfied with their health, 66.1% were not engaged in regular exercise at all, 8.2% exercised regularly 1 to 2 times a week, 5.7% exercised regularly 3 to 5 times a week and none exercised more than 6 times a week.

Thus, it can be concluded that more than 40% of the Substitute Services draftees who were satisfied with their health were found to exercise regularly at least 1 to 2 times a week, whereas

more than 50% those who were unsatisfied with their health did not exercise at all. This showed that the draftees who were satisfied with their health exhibited better exercise habits.

Among those who perceived their health as good, 86.0% did not contract any disease, 13.5% contracted 1 to 2 types of diseases and 0.5% contracted more than 3 types of diseases. Among those who perceived their health as average, 77.2% did not contract any disease, 22.5% contracted 1 to 2 types of diseases and 0.3% contracted more than 3 types of diseases, while those who perceived their health as poor, 64.4% did not contract any diseases, 34.4% contracted 1 to 2 types of diseases and 1.2% contracted more than 3 types of diseases. This showed that more than 70% of the draftees who perceived their health as good or average did not contact any disease and only 0.3% of them contracted more than 3 types of diseases, whereas only 60% of the draftees who perceived their health as poor did not contract any disease, but more than 10% of them contracted more 3 types of diseases. Among those who were satisfied with their health, 86.5% did not contract any disease, 12.7% contracted 1 to 2 types of diseases and 0.8% contracted more than 3 types of diseases. Among those who had an average satisfaction with their health, 78.4% did not contract any disease, 21.4% contracted 1 to 2 types of diseases and 0.2% contracted more than 3 types of diseases, while among those who were unsatisfied with their health, 62.5% did not contract any disease, 36.5% contracted 1 to 2 types of diseases and 1.0% contracted more than 3 types of disease. Thus, we can conclude that

more than half of the Substitute Services draftees were satisfied with their health and the majority of them did not contract any disease. However, the majority of the draftees who were not satisfied with their health did not contract any disease either. This shows that with regard to draftees who were unsatisfied with their health, in addition to the number of detected diseases, more factors such as mental health, lifestyle habits and physical constitution should be taken into consideration (Lin and Lin, 2001).

Cross-analysis of BMI and the number of detected diseases. Among the Substitute Services draftees with an underweight BMI, 81.0% did not contract any disease, 18.8% contracted 1 to 2 types of diseases and 0.2% contracted more than 3 types of diseases. Those with a normal BMI, 73% did not contract any disease, 26.2% contracted 1 to 2 types of diseases and 0.8% contracted more than 3 types of diseases, while those with an overweight BMI, 74.1% did not contract any disease, 25.4% contracted 1 to 2 types of diseases and 0.5% contracted more than 3 types of diseases. From table 4, it can be concluded that the draftees with an overweight BMI were more susceptible to diseases than those with an underweight BMI. This also shows that excessive amount of fat causes overweight which, in turn, causes several diseases such as coronary heart disease, heart attack, high blood pressure, hyperlipidemia and arterial stiffness (Lin, 2001).

Discussion And Conclusion

With regard to smoking, 49.8% of the college students did not smoke ha-

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bitually, and a significant correlation was found between education level and smoking behavior. In terms of drinking behavior, 44.1% of the college students were not engaged in habitual alcohol use, and a significant correlation was found between the subjects' education level, marital status, as well as vocational and financial status and their drinking behavior. That is, men with high school or above level of education showed a higher percentage of alcohol use. As for betel nut chewing behavior, 43.7% of the college students were not engaged in habitual betel nut chewing, and education level caused a significant difference in betel nut chewing behavior: the subjects with high school level of education had a higher percentage of betel nut chewing behavior. With reference to exercise behavior, 48.6% of the college students exercised 0-2 times every week, and a higher percentage of exercise behavior was found in the subjects whose BMI indicated overweight.

The difference of age, education level, marital status, occupation and the number of chronic diseases made a significant difference in terms of betel nut chewing, exercise, and health status. A further analysis by taking into account demographic characteristics, the number of chronic diseases and health behavior yielded the following result: a significant difference was found between body function and demographic characteristics such as gender, age, education level and marital status, the number of chronic diseases, and exercise.

By and large, education level made an obvious difference in unhealthy health behaviors such as smoking, drink-

ing, and betel nut chewing. In another word, the subjects with college or above level of education showed a lower prevalence of these unhealthy health behaviors. Healthy health behavior like exercise also notably influenced Substitute Services draftees' health status: those who exercise more frequently on a weekly basis displayed higher personal health satisfaction and a lower prevalence of smoking, drinking and betel nut chewing.

Data was collected when Substitute Services draftees were having their physical examinations; therefore, the study results do not apply to professional soldiers and no inference can be made about other draftees' health behavior and health status. The results show the correlations among demographic characteristics, Substitute Services draftees' health behavior and health status, but no direct cause-and-effect relationship was found. Some discrepancies were found in the ratio of the variables in demographic characteristics such as age and education level. It is suggested that in the future studies, cognitive behavior and cognitive factor should be measured. For future research related to Substitute Service draftees, studies can be done compare the different military services, different regions, or the differences before and after service. This study found that health behavior is the most important factor among Substitute Services draftees; therefore, this direction is worth pursuing further in future research.

As adolescence is a critical stage during which self-concept is developed and good lifestyle habits are built, health behavior related courses as well stress

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management should be promoted at school. In addition, it is much easier to get rid of bad habits during adolescence than the middle age period. Therefore, to bring to an end the detrimental effects that bad habits have on Substitute Services draftees' health, the government should pay close attention to the severe and destructive impacts tobacco, alcohol and betel nuts have on the health of the citizens of this country.

Relevant personnel in the National Defense system should work on increasing their knowledge on the concept of health behavior and its application to health promotion so as to help implement sanitation and hygiene programs and health promotion projects in the army to promote not only personal awareness of health behaviors but also health condition. Therefore, it is suggested that in addition to disease prevention, the national military medical care system should also reinforce new draftees' education on health promotion and, in cooperation with related policies, help new draftees adjust their lifestyle to avoid health damage, to promote quality of life, to further strengthen the national military force as well as attack and defense power, and in the long run, to avoid the incidence of chronic disease and reduce future national medical expenditures.

Unhealthy behaviors show signs of clustering. We suggest health-related departments should take into consideration the correlation among unhealthy health behaviors and devise an effective health promotion plan to promote the health and wellness of the citizens in Taiwan.

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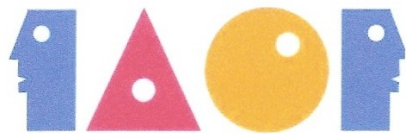
JUSTICE TAX BASED ON MSME ENTERPRENEUR PERSPECTIVE CASE STUDY OF ATOM MARKET SURABAYA

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Abstract

Several previous studies state that Government Regulation No. 46 of 2013 considered as unfair to those who run Micro, Small and Medium Enterprises (MSME). This can be happened because the draft final tax of one percent is charged on the turnover regardless of whether there is additional economic capability of SMEs or not. Government Regulation No. 46 of 2013 has been in effect for three years, according to the observer's view, the regulation requires the existence of a good evaluation both from the SME entrepreneurs and the government.

Accordingly, the purpose of this study was to evaluate the imposition of final income tax at the rate of one per cent from the perspective of MSMEs in Atom Market Surabaya. This study use a qualitative approach, purposive sampling, particularly the case study approach in the SME entrepreneurs in the market atom Surabaya. The results show that from the perspective of MSMEs, justice has not been occurred in the application of Government Regulation No. 46 of 2013. Supposedly justice occurs if the amount of tax is paid in line with the development of the turnover. In addition, other SME entrepreneurs with a higher turnover, though not being shaped as shop equipment, also should be taxed.

Keywords: SME taxes, Government Regulation No. 46 of 2013, the final tax, tax justice.

Background

Micro, Small and Medium Enterprises (MSMEs) is one of the national econ-omy's engine that has an important role in Indonesia. Tambunan (2000) explains that small businesses are proved to be strong and have stra-tegic role in overcoming the impact of the Indonesia's economic crisis in 1997.

Based on data from the Central Bureau of Statistics and the Ministry of Cooperatives and SMEs in 2012-2013, the number of MSMEs recorded is

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57.895 million units, or 99.9 percent of total business unit in Indonesia.

Furthermore, the number of MSMEs workers is as much as 87.3 million workers (CBS, 2016). Along with the trend of units development of SMEs, employment and contribution to GDP has increased as well.

The cost of entry in the formal business of developing countries is high, this is due to the government taxation policies.

Thus the government will need to create a special status for small businesses to increase the tax base (Auriol & Warlters, 2005).

Some of the things that cause little tax from the SME sector by Seidu, Abdul, and Sebil (2015), is the high relative taxes of SMEs in income, the complexity of taxation procedures, lack of tax knowledge, the education level of SMEs, the lack of bookkeeping, multiple taxation, and counterfeit income report.

Anjarwati (2013) explains that if it to be studied further, there are at least five problems of SMEs. First, SMEs are generally constrained in products marketing access and maintaining standardization of the products. Second, SMEs are not yet fully understood in calculating profit and turnover of which will be used as the basis for tax payments. Third, many SMEs still do not understand the obligation and manner of taxes payment. Fourth, for those SMEs who have understood the tax, they often reluctant to pay taxes with a reason of objection on the tax rate. The fifth problem, many SMEs are constrained in paying taxes in the

bank, it is caused by the limited hours of service time and distance access to the banks.

Factors that may affect the tax compliance of SMEs are the willingness to pay taxes and the documents' completeness (Mukhlis, Utomo, & Soesetyo, 2014). Various OECD and G20 countries also simplify the tax rate specifically for the SME sector (OECD, 2015).

The dominance of SMEs in the Indonesian economy has not been able to match the tax revenue earned from SMEs, the data show that most of the tax revenue is dominated by large taxpayers whose account is less than one percent (Endrianto, 2015). Some of the causes are the main focus of the Directorate General of Taxation (DGT) which is focused on the large taxpayers while the oversight of SMEs have not been optimally performed and the low tax compliance of SMEs.

Tax compliance related to the procedure, the procedure of calculation and others are still quite difficult to implement and a little confusing for SMEs.

Tax collection from the SME sector is not the easy thing. Not only in Indonesia. In other countries, both developed and developing countries, the SME sector is one sector that is hard to control in terms of tax compliance.

Research by Seidu et al. (2015) revealed that a significant factors in SME tax are the type of SME, tax-related knowledge, and multiple taxation. It has been recommended that there should be an adequate knowledge of the importance of taxes and the gov-

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ernment should make a more attractive tax which will not be avoided by the formal and informal sectors.

Research by Ocheni and Gemade (2015) in Nigeria which related to the imposition of multiple taxation has a negative impact on the resilience of SMEs and their signif-icant relation-ship between the size of SMEs with the ability to pay taxes.

Therefore, he recommends the government imposes a uniform tax pol-icy and considering the size of SMEs in setting tax policy.

With the various forms of SMEs, prudence is a necessity in setting tax policy. Business size alone is not suffi-cient as a justification for government intervention in the form of special regulations (OECD, 2015).

The Government consideration over the imposition of income tax at the rate of one per cent of the gross turnover every month which had been final for MSMEs, as stated in the ex-planation of Government Regulation No. 46 of 2013, are simplicity in tax collection, the reduced administrative burden for both the taxpayer and the DGT, and paying attention to the de-velopment of economic and monetary.

At first glance it appears to make things easier, but there is a potential injustice because of the SMEs mar-gin's difference. In reality, a number of services businessmen from various sec-tors will probably be happy to wel-come the birth of this policy.

Why not, with a profit margin that could be reached 50 percent, they simply pull a tax of one percent. On

the other hand, when the turnover was nearing 4.8 billion a year, as required by this policy, it opens the possibility of SMEs to split the entity in order to remain being taxed one percent.

While in other sectors, a number of small entrepreneurs with lower profit margins will be dither instead. The impact of rising prices of daily necessities and groceries become a burden for its survival.

The compiling of Government Regulation No. 46 of 2013 does not take the aspect of justice into consid-eration.

The explanations on Govern-ment Regulation No. 46 of 2013 states that the purpose of the imposition of levies on SME turnover up to a maxi-mum of 4.8 billion is a form of con-venience provided by the government.

Syahdan and Rani (2014) men-tion when SMEs refused to follow the policy, it will be taxed greater and more burdensome.

Application of Government Regulation No. 46 of 2013 in Surakarta (Setyaningsih & Ridwan, 2013), tax-payers pay taxes because they feel there is no choice but to pay to termi-nate the obligation to pay taxes.

The imposition of income tax, which is final, means that after the re-payment of income tax of one per cent, which is calculated from the gross turnover, the obligation to pay tax on such income is considered complete and final (Syahdan & Rani, 2014).

SME tax rules should be as easy as possible to be applied to all SME

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criteria, because for this small SMEs with a turnover not have clear book-keeping as their basic responsibilities in the payment of taxes to the state.

In order for the tax collection being managed properly to achieve justice, there are several theories that provide state justification in collecting taxes.

One theory of tax collection is the theory of endurance, Suandy (2000) explains that based on the theory, the tax collection should be in accordance with the power to pay of the taxpayer.

All taxes shall be in accordance with the endurance of the taxpayers with great attention to income and wealth and the spending. In this case, it is clear that the tax on companies (stores) and taxes from shopkeepers are interconnected, and must be analyzed simultaneously by the tax officer (Slemrod, 2004).

This is in line with the concept of fairness in taxation (equity princi-ple), according to Musgrave and Musgrave in Subroto (2014) the imposition of final income is not in accordance with justice because it does not reflect the ability to pay (ability to pay).

Fair taxation is that the greater the income, the greater the tax to be paid. It's called the justice vertical or vertical equity. Income in meant here is the net income, which is an income that is obtained after deducting expenses from gross income according to the deduction allowed by tax regulations.

Voluntary compliance of citizens against taxation policy is a reflection of modern society (van Dijke & Verboon, 2010). Improving tax compliance for SMEs means that the government must establish good communication and build trust for SMEs before imposing sanctions or a warning letter.

The effort to build this trust can also be done by reforming the quality of tax institutions in Indonesia. Research by Torgler, Demir, Macintyre, and Schaffner (2008) in the USA and Turkey shows that the quality of institutions such as the level of corruption also affects the tax morale.

Final income tax which is calculated directly from the taxation of gross income is not in accordance with the concept of fairness in taxation.

The size of the net income of a person or business entity will not affect the amount of tax to be paid because the tax is calculated by multiplying the rate directly against the gross income.

Even at a loss too, with the imposition of final income, person or business entity must still pay taxes.

While Rantung and Adi (2009) explains that the willingness to pay taxes as a value that willingly contributed by someone (defined by rules) which is used for state public finance expenditure and does not receive reciprocal services directly.

The willingness to pay taxes is influenced by several factors, including the condition of the tax administration system of a country, service to taxpayers, enforcement of tax laws and tax rates (Devano & Rahayu, 2006).

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In contrast to previous studies, Sanjaya (2008) in his research showed that the willingness to pay taxes was supported by tax knowledge, perceptions of tax penalties, the improvement of the tax, the perception of the tax officials, and perceptions of the ease of implementation of the tax system.

In comparison, there is a difference between the theory of endurance with the theory of willingness to pay. Tax collection which is based on the theory of endurance is based on internal factors of the taxpayer to pay great attention to income and wealth and spending.

While the theory of willingness to pay said the willingness to pay taxes is influenced by external factors of the taxpayer itself, namely the condition of a country's system of tax administration, service to taxpayers, enforcement of tax laws and tax rates.

The goal of setting the imposition of final income tax by one percent is to provide convenience to taxpayers who receive or earn income from a business that has a certain gross income, to perform calculations, remittance and reporting of income tax payable.

Based on data from the Directorate General of Taxation stating that most of the tax revenue are dominated by large taxpayers which amount is less than one percent.

It shows that the convenience provided by the government to implement the imposition of final income tax by one percent has not been utilized by the SME entrepreneurs.

This research is needed to determine why the SME entrepreneurs take advantage of the imposition of income tax by one percent or not using the facility and even choose not to pay taxes based on the theory of willingness to pay.

This research is expected to be used as a material consideration for the government as one of the basic consideration of changes in tarif imposition of final income tax for SMEs.

The result of the research by Atawodi and Ojeka (2012) in Nigeria, revealed that the high tax rates and the complexity of administrative procedures are the most crucial factors that cause SME tax non-compliance. Abrie and Doussy (2006) also said that the administrative requirements hamper the SME tax compliance and advise the South African government to reduce administrative obligations, compliance requirements, and tax benefits for SMEs.

For subsequent years, the Government and the various stake-holders need to provide information and education to SMEs of information and education related to tax laws, tax laws and various issues relating to the taxation of SMEs, which is also very important to be given to SMEs. Because the better the knowledge on taxation, the easier it will be to comply with taxation (Kołodziej, 2011)

Research Question

Based on this background, the researchers consider it is important to do a case study of tax fairness from the perspective of SME entrepreneurs and

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evaluating the implementation of final income tax by one percent.

Thus the focus of this research is the perspective of the SME entrepreneurs to the imposition of final income tax by one percent, so the research problems can be formulated as follows:

a. How is the application of the imposition of final income tax by one percent to MSMEs in the market atom Surabaya?
b. How is the evaluation of the implementation of final income tax by one percent to MSMEs in the market atom Surabaya?

Theoretical Reviews

According to Rantung and Adi (2009), the concept of paying taxes developed into two sub-concepts.

First, the willingness to pay is the value that an individual is willing to pay, or exchange any sacrifice to obtain goods or services. The second is the concept of taxes.

Waluyo (2003) explains that the tax is an achievement imposed unilaterally by and payable to the government (by regulation), in the absence of counter-achievement, and is used solely to finance government spending.

Agree with Waluyo (2003), Siti (2009) explains that the tax is the contribution of citizens to the state treasury under the Act (enforceable) without the services of reciprocity (cons achievement) directly demon-strated, and used to finance state expenditures.

Based on the explanation of the two subconcepts above, the definition for the willingness to pay taxes could then be developed. Willingness to pay taxes can be interpreted as an act of moral values of the taxpayers to voluntarily spend money (in accordance with applicable law) in which the money will be used for the general purposes of the state, and do not get direct feedback from the state.

Research conducted by Rantung and Adi (2009) state that the willingness to pay taxes could be interpreted as the value contributed by someone willing (defined by regulation) which is used to finance public spending state without acquiring goods or services directly.

The willingness to pay taxes is influenced by several factors, including the condition of the tax administration system of a country, service to taxpayers, enforcement of tax laws and tax rates (Devano & Rahayu, 2006).

In contrast to previous studies, Sanjaya (2008) in his research showed that the willingness to pay taxes was supported by tax knowledge, perceptions of tax penalties, the improvement of the tax, the perception of the tax officials, and perceptions of the ease of implementation of the tax system.

While the research conducted by Rantung and Adi (2009) showed that the shape and perception of the reasons that indicate the willingness of the taxpayer to pay the tax are: (1) the taxpayer feels that the amount of tax to be paid is not burdensome, or at least according to the income. Taxpayers would pay taxes if the tax burden does not affect the ability of the economy significantly. (2) the taxpayer considers that the tax penalty has been carried

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out fairly. With this assessment, the taxpayer will pay tax based on the belief that taxpayers who do not pay taxes will be penalized. (3) Taxpayer assess the utilization of the tax is correct, for example the use of taxes for the construction of public facilities. (4) Taxpayer assess the tax authorities provide good service.

Based on the above statement, it can be explained that the moral stance in the form of desire or willingness to pay the taxes need to consider that the tax is an absolute obligation to the citizens, it is necessary for the government to participate in improving a sense of love towards the state before.

Research Methods

The case studies in this study is one of the markets in Surabaya, which had stood since 1972, namely Atom Market Surabaya. SME entrepreneurs in the Atom Market Surabaya are dominated by gold shop, culinary, clothing, garments, and other potential tax which become a subject of income tax revenue.

In addition, the legendary Atom Market is a market in Surabaya which became the central hub of tourist visits as well as visits from local merchants, so the market target visitors is not only including the area of Surabaya but also includes East Indonesia area. Stands, which reached 2,000 and the various types of businesses, enabling everyone who visit there to find all their needs in one of the shopping areas.

Creswell (2012) explains that the case study is a qualitative approach conducted by researchers by exploring real life through detailed data collection, involving a variety of resources.

A case study approach is expected to provide benefits to the Ministry of Finance, particularly the Directorate General of Taxes, in evaluating the application of Government Regulation No. 46 of 2013 to MSMEs.

A case study approach in this study begins by identifying MSMEs in the Atom Market Surabaya based on the subject which is charged by final income tax according to Government Regulation No. 46 of 2013.

The subject of taxes in accordance with Article 2 of Government Regulation No. 46 of 2013 is "non Taxpayers who receive a permanent establishment business income, excluding income from services in connection with the work-free, with a gross income does not exceed 4.8 billion in the fiscal year ".

Furthermore, Creswell (2012) explains that the unit of analysis for the case study approach is to study the activity or more from more than one individual.

Based on this research, we interviewed eight informants come from the SME entrepreneurs in Atom Market Surabaya with business scope of eligible gross income which not exceed 4.8 billion in the fiscal year.

Eight informants consists of Aiman and Winanjar owner of a fabric store; Andi, Yunita and Arifin gold shop owner, Harnoko clothing store owner, Tono cosmetics shop owner, and Andika the owner of an appliance store (this is not real name because the

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identity of the informants is being kept in order to maintain the credibility of informants).

Our interviews carried out in stages, beginning on December 13, 2016 until December 15, 2016. On December 30, 2016 we reconfirmed to all our informants.

Discussion

A. Implementation of the Final Income Tax Imposition sum of One Percent To Entrepreneurs SMEs in Atom Market Surabaya

The provisions of Article 2 paragraph (2) Government Regulation No. 46 of 2013 states that the taxpayer Non-permanent establishment which receives revenue from businesses, excluding income from services in connection with the work-free, with a gross income does not exceed 4.8 billion in the fiscal year is charged by the final income tax.

Of gross income in the language of trade is generally referred as turnover, whereas in accounting terms known to be called by the income (revenue).

Furthermore, the provisions of Article 2 paragraph (3) Government Regulation No. 46 of 2013, which is not subject to final income tax in accordance with the provisions of Government Regulation No. 46 of 2013 are those who undertake business activities or services in their efforts:
a. using facilities or infrastructure that can be assembled, whether settled or not settled; and

b. using part or all of a public interest which are not destined for a place of business or selling.
For example, itinerant food vendors, hawkers, stall tents on the sidewalk, and the like.

Anjarwati (2013) explain to the taxpayer on income not subject to final income tax in accordance with Government Regulation No. 46 of 2013, but is taxed in accordance with the provisions of the Income Tax Act invitation.

While tax payer which is not subjected to final Government Regulation in accordance with the provisions of Article 2 paragraph (3) Government Regulation No. 46 of 2013 are:
a. Corporate taxpayer who has not been in commercial operation; or
b. Taxpayers body within a period of one (1) year after the commercial operation obtain gross income exceeds Rp4.800.000.000,00 (four billion, eight hundred million rupiah).

Pandiangan (2014) explains there are two parties that are expected to benefit from the enactment of Government Regulation No. 46 of 2013.

For the public, especially taxpayers with gross income of certain categories, the implementation of the Government Regulation No. 46 of 2013 is expected to (1) make it easy and practical to carry out tax obligations, which are to calculate, pay, and tax reporting; (2) Low in terms of amount or number of payments because the tariff is low at only one per cent; (3) the tranquility and comfort to taxpayers for making the payment of tax liabilities to the state.

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The gains derived by government including (1) the functioning of the tax regulerend for the community, (2) increasing number of people who will contribute actively in paying taxes (so that the coverage ratio increases) because it is easily implemented and the tariffs are low; (3) improvement in tax compliance society; and (4) can predict the tax revenue next year from the taxpayer in question.

Some of the business of SMEs in the Atom Market Surabaya stated that since the implementation of Government Regulation No. 46 of 2013, the quietness and comfort is being felt by Aiman-owner of a fabric store because there is an assurance amount of the tax rate to be paid, which is one percent of turnover, so that there are no longer checks led to the underpayment.

Aiman shopkeeper fabric that stood since 1983 until now. Store operations run by family members without hiring additional staff. Declining economic situation and the condition of the Atom Market traders competing with merchants of plaza atoms, causing the turnover of stores from year to year is declining due to the gain on sale which does not correspond to the cost of store operations. *"... Once the profit margin could take an average of ten percent. Even with these conditions, up to three percent profit margin had to be taken, there is an important circulation of goods .... "*

Business communities of SMEs others found tranquility and comfort, aside for making the tax payment obligations, the tranquility was also obtained as to avoid a warning letter from the tax office.

Warning letter will be sent by Tax Service Office when a decline in nominal final tax remitted compared with the previous month.
"... *We will receive a love letter from tax service office if our tax payments fell from the previous month ....*" (Winanjar-owner of a fabric store and Harnoko-owner of clothing store).

"... Rather than receiving a love letter from the tax service office, money from private pockets used to pay taxes ...." (Tono-owner of a cosmetics shop).

Ease in calculating, paying, and the final payment of tax is not felt by businesses in the SME of Atom Market. Some store owners explain that they hire a tax consultant or hire specialized employees who handle taxation.

"... Than the one filling out the form deposited taxes, we hire a tax consultant, although the cost comes out to hire the services of a tax consultant is greater than the final tax payments ...." (Tono-owner of a cosmetics shop and Andi-gold shop owner).

"... I employ accounting staff, he is responsible for all matters relating to tax in my shop ...." (Arifin-gold shop owner).

One of the businesses, namely Winanjar-owner of a fabric store suggested that the ease of application of the final tax of one per cent according to Government Regulation No. 46 of 2013 can be felt by the business is the ease of tax payment without any form of tax payments is difficult (without the account code taxes and code types tax payments), the taxpayer only needs

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to bank and pay the tax in accordance final nominal tax to be paid (automatic calculation of the tax deposited tax service office and connected with the bank).

This was confirmed by Winanjar-owner of a fabric store *"... the payment mechanism should be simplified, that can be equated with pay land and building tax or the motor vehicle tax. Especially at this time, we are prompted to show the payment code. The reporting mechanism was easy, because usually the seller, who had already been elders, do not understand computers, let alone asked to fill out a tax report ..... "*

The amount of the final payment of income tax of one per cent from the turnover of businesses in the Atom Market is still burdensome, according to the businessmen.

*"... The economic situation does not improve, causing the loss of my merchandise. Although there is a discourse of final income tax payment amount that will be passed down from one percent to 0.5 percent, it is still useless, as long as the economic situation has not improved ... " (*Tono-owner of a cosmetics shop).

"... The application of one percent tariff, when compared to the general rate of article 17, on the basis of the tax calculation of 30% of turnover based on Net Income Calculation Norm reduced by non taxable income, has a tax liability that is not so different ...."

Tax fairness is the nature (act or treatment) which is not arbitrary or biased on the existing taxation system

(Syahdan and Rani, 2014). One percent is not a small number for SMEs.

Illustrated, for example, a mobile phone kiosk, if there is a bid of a product from Rp.610.000,00 to be Rp605.000,00, it will certainly be maintained, as one percent of Rp600 thousand is amounted to Rp6,000, if the profit is Rp5,000 and the must paid tax is Rp6.000 then it will be burdensome or become negative. Not even once that it can be equated among the other economic doer, such as stalls tegal whose profit margin is quite high.

B. Evaluation of the Implementation of Final Income Amounting One Percent To Entrepreneurs SMEs in Atom Market Surabaya

Evaluation of the implementation of final income tax of one percent is applied at Atom Market is already implementing the tax calculations in accordance with Government Regulation No. 46 of 2013.

Based on the results of research and interviews on Atom Market, all traders who are incorporated within HIPPA (Atom Market Traders Association) have paid income tax of one percent of SME's final income tax.

Traders do deposit taxes with few options, through the services of a tax consultant, collectively through HIPPA, or do a direct deposit via bank.

With the issuance of the policy on income tax provisions stipulated in Government Regulation No. 46 Year 2013, in which the regulation explains the business received the gross turnover which do not exceed Rp.4,8 bil-

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lion in one year, will be subject to final Income Tax.

Although the Government Regulation No. 46 of 2013 is not explicitly mention MSME, but from the tax scheme of the Government Regulation No. 46 of 2013 and based on the limitation of criteria according to Law No. 20 of 2008, MSME will be charged one percent of turnover.

From the principles contained in the Income Tax Act, the principle of fairness is one thing that is highlighted in taxation.

Taxes should be imposed on the increase in economic capability. While turnover is just an uncut burden income in business activities.

When it's compared with the profit taken by SMEs business operators with the obligation to pay taxes in Government Regulation No. 46 of 2013, then the provisions of Government Regulation No. 46 of 2013 is burdensome, although only obliging for tax payer to pay one percent of turnover. "…*thus, the total tax liability accounted for 33 percent of the gross profit. That is not including the cost of store operations. The tax rate in real terms exceeds the income tax rate tax payer body which amounted to 25% of net profit*…" (Winanjar-the owner of a fabric store).

Winanjar-the owner of a fabric store, also explain that the burdensome conditions to pay taxes in Government Regulation No. 46 of 2013 due to the economic conditions that have been coming down since 2014, causing the turnover decreased about 60%.

Andi-household appliances shop owner has objected to Government Regulation No. 46 of 2013 as follows:

"…*yes certainly it's burdensome, but for the future we should be accepted, so in the future everything will be more developed. If it is developed later in the future, we can feel it ourselves…*"

By the assumption that this tax is not fair for SMEs with low margin, then there should be a scheme for SME segmentation based on its turnover. The Segmentation can be used as a base on the amount of tax to be charged.

Harnoko-the owner of a fabric store, stated that :

"….*if I may give suggestion, final enactment of income tax by one percent should consider the minimum amount of turnover that is subjected to final income tax. For example, the minimum gross income is USD 500 million to 4.8 billion, which is the object of final income tax by one percent…*"

Furthermore, he stated that "…*when it's compared with workers in factory wages with a definite nominal monthly for regional minimum wage. While SMEs business operators whose income is uncertain on every month, why they do not get the right on final income tax personal exemption of the Government Regulation No. 46 of 2013…*"

The definition of tax also needs to be done deconstruction by considering aspects such as the environment in order to balance the dominant economic composition to avoid swept capitalism.

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Taxation practices also need to start paying attention to the environment by making the tax regulation with a positive impact on the environment (Liu, 2013).

Yunita and Arifin-gold shop owner expressed his objection due to the application of gold was also the object of value added tax "…*the gold we sell get two percent value added tax , then we must pay the final income tax by one percent based on Government Regulation No. 46 Year 2013. Imagine how much margin we need to make…*"

In the background, it is mentioned that there is a difference between the theory of endurance with the theory of willingness to pay, that taxation is based on the theory of endurance which is based on internal factors of the taxpayer by paying great attention to income, wealth, and expenditure.

While the theory of willingness to pay said the willingness to pay taxes is influenced by external factors of the taxpayer itself, namely the condition of a country's system of tax administration, service to taxpayers, enforcement of tax laws and tax rates.

From the research that we did on the merchant of Atom market, there are economic requirements that must be fulfilled in tax collection, which should not interfere with the economy.

The turnover obtained by SMEs entrepreneur will be used to pay employee salaries, electricity costs, rental, lending, and cover the costs of high start-up. So with the tax burden request to take precedence over other payment obligations, the government seemed not pro-SME, as well as contrary to the intention of empowering SMEs as stipulated in Law No. 20 of 2008.

Based on this argument, Indonesian Young Entrepreneurs Association (HIPMI) is hoping that the government revise the Government Regulation No. 46 of 2013 as it is considered burdensome to MSME entrepreneurs.

Besides the issue of the tax object, without consideration of whether SMEs are still in the growing stage, which often experience the loss, but the tax burden remains one percent.

In fact, if the turnover at 4.8 billion rupiah of large and medium companies experience the loss, there are tax loss compensation of fiskal loss. Justice obviously does not appear in tax treatment between SMEs and large enterprises.

Conclusion

From the explanation above, it can be concluded that in general, the willingness to pay taxes for SMEs, especially for the SME entrepreneurs in the Atom market is still high, as long as the ease to calculate, pay, and report the tax in accordance with the actual situation.

On the other hand, the ability to pay taxes began to decline due to the sluggish economy and the advent of e-commerce which is resulting decline in turnover and margin to be lowered.

It appears that the theory of willingness to pay stating that the willingness to pay taxes is influenced by external factors of the taxpayer itself, namely the condition of tax administra-

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tion system of a country, service to taxpayers, enforcement of tax laws and tax rates have a dominant role in the final payment of income tax of one per cent of the turnover in Government Regulation No. 46 of 2013.

While the theory of endurance stating that the tax collection should be in accordance with ability to pay the taxpayer, so the depiction of tax justice has not been felt by the SME entrepreneurs in the Atom market Surabaya.

The willingness to pay taxes are still high despite the fall of turnover, this is due if the taxable value drops, SMEs intended to be monitored and given tax bill because it is not running tax liability properly. Even with the average profit margin below 5%, the willingness to pay taxes persist despite heavy.

In addition, there are additional costs to be incurred, some SMEs are forced to use the services of a tax consultant because business owners find it difficult to report and pay their tax obligations.

If asked to choose, the perpetrators of SMEs referred prefer the ease and clarity compared to the tax rate. For them, the general rate is not a problem as long as it's easy and obvious, especially for ordinary people who aren't used at using computers.

Limitations and Further Research

The results of this study are expected to contribute in particular to the government in formulating tax policy more easily and precisely for the perpetrators of SMEs.

The samples in this study using purposive sampling, this is done because many SMEs are not willing in the interview related to the issue of taxation.

Further research can be expanded by looking for a sample in another location. In addition, the study of willingness and ability of tax payments from the offender e-commerce can also be made to explore the potential and expand the tax base.

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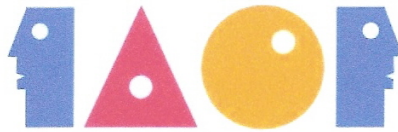
DEVELOPING A SUSTAINABLE TOURISM ATTITUDE IN TAIWANESE RESIDENTS

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Abstract

This study verified the fitness of early responsible environmental behavior linear models on the attitudes of Taiwanese slow city residents toward the development of sustainable tourism. All parameters within the 1600 valid questionnaires recovered were evaluated using structural equation modeling, and the results showed that the models have satisfactory fitness with Taiwanese slow cities. It is concluded that if Taiwanese slow city residents' awareness of and relevant knowledge toward a new environmental paradigm can be strengthened, the cohesion of community awareness can be enhanced and the residents' attitudes toward sustainable tourism development can be improved.

Keywords: Sustainable Tourism Development, Pro-environmental behavior, Cittaslow, Community awareness

Introduction

In recent years, environmental disasters and ecological damages associated with global warming and climate changes have become

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prominent and a crisis and topic that the world must address. One popular approach has been the development of sustainable tourism. For example, the 2016 policy agendas of Taiwan's Tourism Bureau included "Taiwan's 2015–2018 Tourism Action Plan," the "Cross-Domain Highlights and Feature Bonus Plan," and the "Experience Tourism: Light Up the Village" demonstration project, which assist local governments in creating international tourism and recreation highlights, as well as developing local tourism attractions and features (Tourism Bureau, Ministry of Transportation and Communications R.O.C, 2017). Based on these policy agendas, the nation's tourism development is focused on encouraging in-depth and environmentally friendly sustainable tourism.

Numerous communities or townships across the globe have worked to obtain transformation and development opportunities through the power of tourism (Mbaiwa, 2003; Reid, Mair, & George, 2004; Crouch & Ritchie, 1999; Briedenhnn & Wicken, 2004). The 70th Session of the United Nations (UN) General Assembly in September 2015 announced that 2017 would be designated as the "International Year of Sustainable Tourism for Development." Within this context "slow cit-

ies" are considered to be capable of preventing or delaying the losses of historical heritage, natural resources, and traditional cultures caused by the spread of western modernization. The concept of slow cities is directly related to the sustainable development of local environments, because it constructs and maintains local residents' history, natural environment, socio-cultural values, and economic development. In this study, the pro- environmental behavior model was adopted to assess its applicability in four Taiwanese slow cities (Sanyi Township, Nanzhuang Township, Dalin Township, and Fenglin Township) and understand the attitude of slow city residents toward sustainable tourism development. It was expected that the slow cities would be capable of achieving the goals of slow city ecology, production, and life sustainability due to pro- environmental behavior, including sustainable tourism development.

Literature Review

The establishment of slow cities is generally followed by an influx of tourists, during which the original township culture, environment, ecology, production, and life may be positively or negatively impacted, and the the residents' attitudes toward the development of slow cities are estab-

lished (Bulter, 1980). The residents' overall attitude toward slow city development is the major factor that affects an area's sustainable tourism development (Andereck, Valentine, Knopf, & Vogt, 2005; Landford & Howard, 1994; Allen, Long, Perdue, & Kieselbach, 1988; Andereck & Vogt, 2000).

Sustainable Development, Sustainable Tourism, and Slow Cities

The "2030 Agenda for Sustainable Development" and the new sustainable development goals (SDG) approved by the UN General Assembly included tourism as one of the three SDGs (UNWTO, 2015). A crucial strategic goal for the world's tourist attractions, sustainable tourism can reduce resource consumption, protect the ecological environment, and help shape the uniqueness of the market (Pulido-Fernández, Andrades-Caldito, & Sánchez-Rivero, 2015). The main subjects in tourism are history, monuments, natural resources, and local social and cultural activities. Notably, these elements are mostly directly or indirectly related to the environment. In other words, tourism is mainly based on activities conducted in the context of the environment, which renders sustainable use of various resources in the course of tourism activi-

ties a critical topic. Several organizations, including Cittaslow, are currently consolidating the sustainability of historical buildings, natural resources, and sociocultural values to protect them from further damage by humans.

Slow City Residents' Attitude and Impact on the Development of Sustainable Tourism

A study by Landford and Howord (1994) revealed that the extent to which residents participate in tourism activities affects their attitude toward the development of tourism. Similarly, in a study on the young residents of the Prespes National Park, Greece, Trakolis (2001) discovered that the national park residents' degree of participation was positively correlated with the attitude of national park development. In Canada, Reid, Mair, and George (2004) examined residents from six communities and determined that their degree of participation in tourism activities also had a positive correlation with the attitude toward sustainable tourism development. Tosun (2006) conducted research in the Urgup and Ankara regions in Turkey and found that differing patterns of resident participation yielded differing attitudes toward community development tourism. Other studies, such as those con-

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ducted by Ko and Stewart (2002) in Jeju Island and Reid et al. (2004), have demonstrated similar results.

Because the development of sustainable tourism in slow cities is based on local residents' common interests and problems, their attitudes and opinions are vital. In addition, the identification and effective management of local knowledge and experience must rely on local residents (Fredline & Faulkner, 2000). Slow city residents' attitude formation regarding community development is not only affected by their personal feelings, but is also changed by their interactions with the groups and organizations developing slow cities.

Communitarianism and Community Awareness

Culbertson and Chen (1997) argued that the most essential core idea of communitarianism is the sense of cohesion and correlation between people. Thus, it is necessary to establish participatory community groups with core values. Indeed, most scholars advocate for the formation of common group values, and agree that communitarianism refers to participation in community affairs as well as the gathering of community awareness based on the overall principle of public welfare and altruistic spirit. This conceptualization facilitates the sustainable development of communities (McGillivray & Walker, 2000).

Several scholars have suggested that community awareness and attitude toward sustainable tourism development are positively correlated. For example, McCool and Martin (1994) conducted a study on Montana residents and determined that higher community awareness resulted in more positive support toward the development of tourism activities. Through their research in Waikiki, Hawaii, Sheldon and Abenoja (2001) learned that when tourism activities become a common goal for community development, community awareness produces a significant positive correlation with residents' attitudes toward tourism development. Elsewhere, Kneafsey (2000) discovered that the impacts of globalization and the commercialization of local resources in European villages have stimulated residents' recognition of the sense of identity and awareness toward their communities. This awareness has also fostered community residents' identification with, and positively influenced their attitude toward the development of community tourism.

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By contrast, some studies have generated results that contradict the aforementioned findings. For example, a study by Gursoy and Rutherford (2004) that was conducted in Washington and Idaho, as well as one by Landford & Howord (1994), indicated that community identity did not produce a significant difference on residents' attitudes toward sustainable tourism development. The reason for this stark contrast is unclear and warrants further study on the subject.

Inappropriate tourism activities and entertainment behaviors can directly or indirectly influence tourist destination environments; specifically, they tend to result in environmental or ecological degradation at the destinations (Lee, Jan, & Yang, 2013). To ensure that high-quality travel experiences are provided, administrators in tourist areas have tried to reduce the adverse impacts of tourists' expected and unexpected behaviors on the environment (Atik, 2010; Ballantyne, Packer, & Falk, 2011; Ballantyne, Packer, & Hughes, 2009; Ballantyne, Packer & Hughes, 2008). For example, they explain the intervention strategies that have been implemented at various destinations during the service process. Ballantyne, Packer & Hughes, 2008; Kim, Airey, & Szivas, 2011; Duerden & Witt, 2010) and educate and encourage tourists to be mindful of the environments at their destinations. In addition, tourists can gain environmental knowledge from various information services and then implement positive environmental behaviors, such as avoiding overturning rocks (Alessa, Bennett, & Kliskey, 2003) and not collecting plant and animal specimens (Alessa et al., 2003; Kim et al., 2011). Burgess, Harrison, and Filius (1998) also asserted that early responsible environmental behavior (REB) linear models (Figure 1) can be used to enhance environmental understanding and knowledge; these models also engender environmental awareness and care (i.e., environmental attitude). Environmental attitude eventually expands, through personal attitude, to overall community awareness and fosters slow city residents'

Figure. 1. REB linear model for pro-environmental behaviors.
(Source: Burgess et al., 1998)

(REB). Developing sustainable tourism is a key part of REB.

Methodology

According to the 72 requirements by Cittaslow International, cities must continually engage in environmental protection and sustainable development to retain their title of "slow city" (Cittaslow International Association, 2017). In this study, a conceptual model was drawn to clarify the development direction of slow city community policies (Figure 2).

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┌─────────────────────────────────┐
│   New Environmental Paradigm    │
└─────────────────────────────────┘
        ↙                 ↘
┌──────────────────┐   ┌─────────────────────────┐
│Community Awareness│→ │Attitude on Sustainable  │
│                   │   │Tourism Development      │
└──────────────────┘   └─────────────────────────┘
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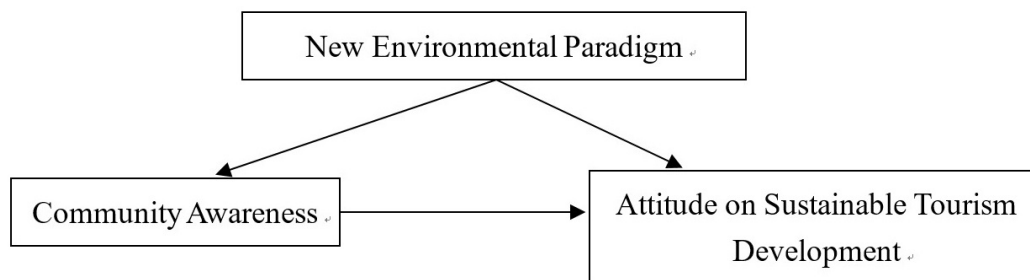
Figure. 2. Conceptual model for this study.

Bollen (1989) noted that verification studies utilizing structural equation modeling (SEM) are more satisfactory when a 7-point scale is adopted; thus, a 7-point Likert scale was employed in this study. The scale was divided into three dimensions, namely new environmental paradigm, community awareness, and attitude toward sustainable tourism development. To create the indicators for each dimension, Dunlap and Van Liere (1978); Landford and Howord (1994) and Gursoy et al. (2004); and Kim, Woo, and Uysal (2015) and Kim, Uysal, and Sirgy (2013) were referenced, respectively.

The sample number formula proposed by the U.S. Creative Research System (Hunter & Jackson, 1982) was utilized to select the sample number for this study to ensure a sampling error of less than 5% at a confidence interval level of 95%. After calculation, the sample number in this study was 1499; in total, 1600 questionnaires were distributed to control for the sampling error.

Data Analysis

The data were analyzed in three stages. First, the item total correlation was calibrated and each structure (general REB and site-specific

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REB) was introduced to verify that they appropriately measured each construct (Lee & Kim, 2012). Next, the relationship between the established measurement indicator and potential variable was tested using a measurement model, and the validity of the measurement indicators (questionnaires and scales) was tested through confirmatory factor analysis using SPSS Amos. Finally, a SEM analysis was conducted using the maximum likelihood estimation to estimate the parameters and examine the causal path relationship between potential variables; path analysis was also performed on potential variables to determine the fitness of the SEM.

Results

The results of this study were accurate within a sampling error range of 2.2% at a 95% confidence level. The Cronbach's α for the new environmental paradigm, attitude toward sustainable tourism development, and community awareness were 0.884, 0.884, and 0.889, respectively. All scores exceeded the benchmark of 0.70 (Nunnally & Bernstein, 1994), indicating that the research tool possessed an acceptable internal consistency for the measurement items within the same structure.

Descriptive Statistics

Among the respondents, 42.3% were female and 52.7% were male; 56.1% were married and 43.9% were single; 18.4% were aged 41–50 years old and 25.1% were aged 21–30 years old; 41.6% had college degrees and 31.6% had only high school degrees; 30.6% worked in the service industry, whereas 15.7% and 16.9% were laborers and students; 36.9% had resided in a slow city for 10–20 years and 35.3% had resided in a slow city for more than 20 years; and 36.1% had a monthly income of NT\$ 20,001–40,000 and another 36.1% had a monthly income of less than NT\$ 20,000 (as of May 13, 2017: US\$ 1 = NT\$ 30.35).

Model Fitness Indices

Bagozzi and Yi (1988) stressed that when using χ^2/df to test model fitness, a smaller ratio indicated a more satisfactory result. In the present study, the χ^2/df for the model was 1.276 (< 5). Additionally, Hair et al. (1988) noted when the goodness-of-fit index (GFI) and adjusted goodness-of-fit index (AGFI) are closer to 1, a model is deemed more fit (however, there is no absolute criterion to determine the fitness of a model). Subsequently, Baumgartner

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and Homburg (1996) suggested that the GFI and AGFI values in research should be greater than 0.90, and they contended that a model is only acceptable if GFI > 0.9 and AGFI > 0.8. In the present study, the model was subjected to 1000 bootstraps, which yielded a GFI and AGFI of 0.980 and 0.983 respectively. Moreover, the acceptable standard for the comparative fit index (CFI) is > 0.90; in the present study, the CFI = 0.997. In short, the fitness indices regarding the model in this study were all within the standard values, indicating that its results would be acceptable. Therefore, the model used here to elucidate slow city residents' sustainable tourism development attitudes could be utilized to explain actual observation data.

This study mainly followed the proposal by Bagozzi and Yi (1988), and thus adopted indicators such as individual item reliability, composite reliability (CR), and the average variance extracted (AVE) of potential constructs to evaluate the measurement model. The evaluations of each indicator are summarized in Table 1.

The factor loadings in this study were between 0.5–0.95, and all CR values were greater than 0.6, indicating

a high internal consistency for the potential variables. Moreover, because all factor loadings greater than 0.5 are significant ($t > 1.96$, $p < 0.05$) and because all t values associated with each fully standardized factor loading exceeded 1.96, the measures were considered to have achieved convergent validity on the project level. Thus, statistical significance was achieved (Anderson & Gerbing, 1988). Table 1 lists the factor loadings, t values, AVE, and CR of all of the potential variables.

Direct Effect of the Independent Variables on the Dependent Variables

The path values from new environmental paradigm to social community, from community awareness to sustainable tourism development attitude, and from new environmental paradigm to sustainable tourism development attitude were 0.07, 0.487, and 0.487, respectively. All of these values achieved significance. Based on the path and effect analysis, new environmental paradigm directly affected slow city residents' community awareness and indirectly impacted the residents' attitudes toward sustainable tourism development, and community awareness directly affected the residents' attitudes toward developing sustainable tourism. Table 3 details the path analysis results.

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Table 1 Factor Loadings, *t* Values, CR*, and AVE**

Dimensions / Items	Factor loading	t-value	CR*	AVE**
New Environmental Paradigm			0.88	0.61
The impact of human behaviors cannot exceed the capacity of the environmental system during the development of sustainable tourism.	0.67			
Sustainable economy, environment, and society should be considered during the development of sustainable tourism.	0.74	26.06		
We should respect all lives and protect the habitats for flora and fauna during the development of sustainable tourism.	0.82	28.17		
The development of sustainable tourism should break away from the consideration of the current generation, and take into account the needs of the future era.	0.84	28.68		
Humans and the whole ecological system are interdependent in sustainable tourism development.	0.83	28.12		
Community Awareness			0.88	0.52
I have a sense of belonging here and feel that I am a part of this place.	0.69			
I cannot think of another place that is more suitable than my current place.	0.73	26.62		
My life experiences here make me unwilling to leave.	0.80	28.94		
I have found the life I want here.	0.83	29.78		
I understand the local cultural background here.	0.74	26.80		
I try to help when the need arises here.	0.65	23.87		
I promote and cooperate with the various activities and requests of slow cities.	0.62	22.91		
Sustainable Tourism Development Attitude			0.89	0.50
I think local tourists' attitudes and behaviors are satisfactory, and do not inconvenience the residents.	0.69			
The number of tourists should be controlled to avoid the deterioration of the local social atmosphere and environment.	0.72	26.12		
I believe that the positive aspects of sustainable tourism development are greater than its negative aspects.	0.77	27.86		
I am willing to cooperate with slow city activities and create local features.	0.75	27.08		
I am willing to cooperate with the development of slow cities and clean the environment as well as the public facilities.	0.77	27.90		
I am willing to provide travel information and high-quality services.	0.70	25.65		
I am willing to take the initiative to assist foreign tourists	0.71	25.90		
I am willing to take the initiative to help arrange the city 's "slow" route.	0.51	18.92		
Sustainable economy, environment, and society should be considered during the development of sustainable tourism.	0.74	26.06		
We should respect all lives and protect the habitats for flora and fauna during the development of sustainable tourism.	0.82	28.17		
The development of sustainable tourism should break away from the consideration of the current generation, and take into account the needs of the future era.	0.84	28.68		

*: composite reliability.
**: average of variance extracted.
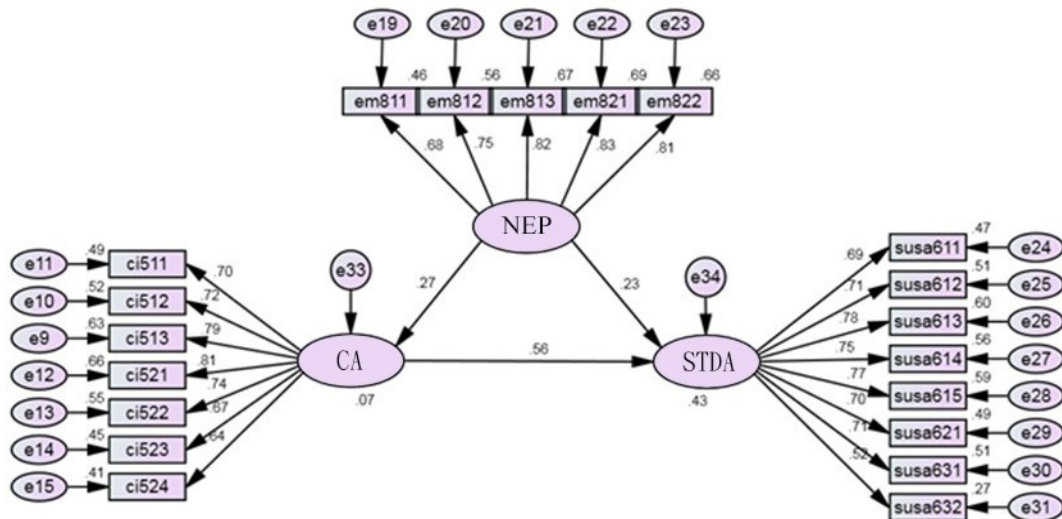
Note: Sustainable Tourism Development Attitude (S.T.D.A.), New Environmental Paradigm (N.E.P.), Community Awareness (C.A.)

Figure 3. Model of slow city residents' attitudes to the development of   sustainable tourism.

Table 2 AVE Discriminant Validity

Dimensions	A	B	C	M	SD
A. Sustainable Tourism Development Attitude	1			4.95	1.00
B. New Environmental Paradigm	0.35	1		5.76	0.91
C. Community Awareness	0.61	0.24	1	4.96	1.01

Note: Boldfaced numerals are AVE root mean squares

Table 3 Path Analysis Results

Path	Estimate	S.E.	C.R.	p	SMC(R2)	Discrimination
Community Awareness←New Environmental Paradigm	0.38	0.04	9.18	***	0.07	Accepted
Sustainable Tourism Development Attitude←Community Awareness	0.54	0.03	19.55	***	0.49	Accepted
Sustainable Tourism Development Attitude←New Environmental Paradigm	0.28	0.03	8.90	***	0.49	Accepted

*** ：p < 0.001

Discussion

This study adopted the REB linear model introduced by Burgess et al. (1998) as the theoretical framework and studied Taiwanese slow cities using a novel first-order three-factor (namely, new environmental paradigm, community awareness, and sustainable tourism development attitude) model. The model was developed and verified using SEM; several fitness indices were also employed to ensure that the model had satisfactory fitness. The results indicated that if Taiwanese slow city residents' awareness toward and relevant knowledge of the residents toward a new environmental paradigm can be strengthened, the cohesion of community awareness can be enhanced and the residents' attitudes toward the development of sustainable tourism (i.e., their REB) can be indirectly improved. These results are consistent with those proposed by Alessa, Bennett, and Kliskey (2003), Alessa et al. (2003), and Kim et al. (2011). Notably, because this study focused solely on unique metacommunities (i.e., slow cities), the applicability of the model to other types of communities remains unknown. Moreover, because of the differing customs in various countries, the applicability of the model to slow city residents in other countries is unconfirmed, and is the key limitation of this study. Future research is encouraged to address these limitations. The research results here can provide the tourist industry, government, and academia Overall, the promotion of sustainable tourism development in slow cities requires the cohesion of residents' common awareness in advance to obtain a multiplier effect.

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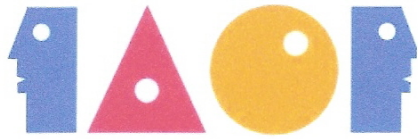
THE IMPACT OF SOCIAL SUPPORT ON JOB PERFORMANCE: THE EMPIRICAL STUDY OF MEDIATING AND MODERATING EFFECTS OF RELATED VARIABLES

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Abstract

Business in Taiwan are moving towards greater internationalization and globalization with many expatriates assigned to foreign branches or subsidiaries now working in the Taiwanese banking industry. This can raise issues with regard to social support, organizational commitment, cultural distance, expatriate adjustment and family-work conflict, which then influence job and task performance.

Based on a questionnaire survey, data collection and statistical analyses, it is found that social support given to bank expatriates in Taiwan significantly affects their job performance. Social support also significantly affects their organizational commitment, organizational commitment and expatriate adjustment also significantly affect their job performance. In addition, this study also finds that organizational commitment has a mediating effect on the relationship between social support and job performance. Finally, this study finds that cultural distance and family-work conflict (FWC) play a significant moderating role in the research framework.

Keywords: Banking Industry, Social Support, Cultural distance, Expatriate Adjustment, Job Performance, Organizational Commitment, Family-Work Conflict (FWC)

Introduction

The rapid globalization has put financial and banking industry in Taiwan in an overly competitive state. Under the policies of the Ministry of Finance, including financial liberalization and internationalization, financial businesses have worked to develop the domestic market and actively establish overseas bases of operations, provide international financial instruments and services, and participate in international financial activities to enhance both management and market share, pursue business growth, and increase earnings. Since people are the most important asset in banking industry, which is immediately facing the issues of training international financial professionals and the management of global human resources when it outstretches the businesses in a foreign

context. Such international tasks present great challenges in a global commercial environment, and have become a critical issue for researchers and international human resource practitioners (Siu, Lu, & Spector, 2013).

More and more transnational corporations have sent expatriates to foreign countries to execute and monitor international tasks. These individuals have to be open to the diversity of a multicultural society so as to interact and associate with colleagues from different cultural backgrounds. Successful expatriate managers have better job performance and can create global competitive advantages for their banks.

Beugelsdijk, Slangen, Maseland, & Onrust (2014) stated that cultural distance generally referred to the mean dif-

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ference between the populations of the home and host countries. Individual enterprises should thus aim to reduce this distance with regard to customers in the host country. Beugelsdijk et al. (2014) claimed that the wider cultural difference in a host country provided more opportunities for those enterprises, targeting local customers in host countries with closer cultures. Accordingly, a greater cultural difference in the host country would result in less correlation with the cultural distance in the home country.

Different arguments are proposed by scholars when discussing cultural distance. Among them, Hofstede (1990) classified a country's cultural values into five phases of power distance, uncertainty avoidance, individualism, masculinity, and long-term orientation. When making a comparison among European-American countries and Asian countries, it can surely find that a great gap exists between Western culture (as represented by European-American regions) and Eastern culture (as represented by Asian regions). Under the trend of economic globalization, issues on trans-cultural management of the two sides have attracted scholars' attention.

According to Oberg (1960), there are different cultural conventions, rules, and enactments in different countries or regions. When in foreign environments, people often appear confusion, anxiety, and insecurity due to their fear of misconduct or violation of local taboos. All these are called cultural shock. Expatriate adjustment, on the other hand, refers to the process of living in a foreign culture and making work-related adjustments to one's behavior, which explains the degree of mental comfort and personal familiarity that a person feels with the culture in the host country. Black(1988) and Black & Stephans (1989) categorized expatriate adjustment into job adjustment, general adjustment, and interaction adjustment. Job adjustment referred to the degree of comfort presented by work value, work experience, and evaluation standards; general adjustment stated the degree of mental comfort presented by the culture and environment of the host country, including climate, food, and neighborhood; and interaction adjustment expounded the degree of interaction adaptation towards the host country and the locals.

Whyte (1956) first came up with the idea of "organizational commitment," saying that the organization man not only worked for an organization but also belonged to it. Porter et al. (1974) further pointed out that organizational commitment referred to the degree that an individual identified and involved in an organization, including three phases

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of 1) value commitment: an individual who strongly believed in and accepted organizational goals and values, 2) effort commitment: an individual who revealed the willingness to strive for organizational goals, and 3) retention commitment: an individual who clearly hoped to remain a part of the organization. According to the research findings from Morries & Sherman (1981), organizational commitment could predict the phenomenon of job-quitting; while Mowday et al. (1981) stated that employees with high organizational commitment showed better job performance than those with low organizational commitment. Expatriates surrounded by foreign cultural networks needed more social support so as to boost their organizational commitment and expatriate adjustment. Nguyen, Felfe, & Fooken (2015) believed that expatriate commitment towards the parent company might possess the potential to become a leading force, because it better connected with and embedded in the family culture. Under the situation of strong commitment to the parent company, expatriate retention would be decided less by the expatriates' commitment to the local business in the foreign country. Based on the research findings, all composite parts (affective, normative, and continuous) from both parent company commitment and local management com-

mitment positively predict the retention of international assignments.

The influential factors in expatriate adjustment and international work efficiency (i.e. job satisfaction and job performance) are important for researchers and companies. In particular, the past research indicated that social support (i.e. supervisor support and perceived organizational support) might enhance both expatriate adjustment and job performance (Siu et al., 2013). Since social support refers to the exchanges that occur among people, an employee would reduce the negative effect on the organization caused by stress when a manager immediately offers emotional and operational assistance on seeing that the expatriate member's stress is caused by work. Siu et al. (2013) also found negative correlation between social pressure and job performance, with social support as the moderator between these two variables.

When an organization is pushed to rapidly change in a competitive environment, work demands are increased. The working population is significantly changed, and many firms are facing a more competitive work environment, called Family-Work Conflict (FWC). This FWC is a growing issue referring to the conflicts that arise due to the stress caused by incompatible roles at work and in the family, and this is more likely

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to occur among expatriates. Kim, Lee, Park, & Yun(2015) discovered that supervisor support had the strongest impact on the relationship among work interference with family (WIF), family interference with work (FIW) and knowledge sharing when the former is low and the latter was high. Rudolph, Michel, Harari, & Stout (2014) found a significantly positive relationship between perceived organizational social support and perceived supervisor social support, a significantly negative relationship between perceived organizational social support and WFC, and a significantly negative relationship between perceived supervisor social support and FWC.

According to above literature review, this study aims to examine the effects of social support, expatriate adjustment, and organizational commitment on job performance in the context of overseas expatriates of banking in Taiwan as well as the factors of FWC and cultural distance between parent and host countries. The relationships among social support, organizational commitment, cultural distance, expatriate adjustment, FWC, and job performance are discussed through a literature review and empirical research.

Literature Review

Relationship between Social Support and Job Performance

Chang, Lu, & Pan (2012) argued that more family support meant more assistance from one's family and daily life. With regard to work-family enrichment and spillover theory, an increase in family resources allows an individual feeling fewer worries in the workplace. In other words, a good family life enables an individual's work to be more efficient and the individual to become a better worker when he/ she acquires skills, knowledge, behaviors and points of view from investing in his/her family, giving rise to positive emotions and attitudes (Carlson, Kacmar & Grzywacz, 2006). The factors relating to expatriate adjustment and international work efficiency (i.e. job satisfaction and job performance) are important for researchers and companies. In particular, past researches indicated that social support (i.e. supervisor support and perceived organizational support) might enhance both expatriate adjustment and job performance (Siu et al., 2013). Since social support refers to the intercourse that occurs among people, including *those factors* related to emotional concerns, supportive tools, and information or appraisal. An employee would reduce the negative effects on the organization due to stress when a manager immediately offers emotional and

operational assistance while perceiving that an employee has work-related stress. In ordinary work environments, socially supportive interactions could also prevent stress from occurring.

If an individual receives a high level of support from family and friends, it then has positive spillover effects so that the individual believes in themselves and invests more energy and time in their work. In this case, job performance during an expatriate assignment would be enhanced. Moreover, if an employee experiences more organizational support and colleague support, they believe that they will receive more rewards at work after the focal work value or capability is developed. That is, an individual with more organizational support will believe that the value potential of the expatriate career commitment would be realized and rewards would be acquired after they have taken part in the project, which then in turn enhances an expatriate's job performance. Accordingly, the following hypothesis is proposed in this study.

H1: Social Support has significant and positive effects on Job Performance.

Relationship between Social Support and Expatriate Adjustment

Chen, Lin, & Tsai(2013) investigated that supervisor support moderated the relationship between cultural intelligence (CQ) and overseas work adjustment, and the three-way interaction among CQ, loneliness and supervisor support had a significant impact on overseas work adjustment. Personal adjustment to different cultures might be enhanced under high family support and friend support. In addition to substantial family resource support, high family support and friend support mean that one's personal capabilities are recognized and the family or friends would quickly provide a needed psychological and substantial support when encountering problems, thus bringing forth positive effects. The focal individual therefore believes in his/her competence for more work challenges and would more quickly achieve expatriate adjustment. Lee & Katrina(2014) found that family support and family adaptability had positive influence on expatriate adjustment. Expatriates who had prior experiences on parental demand and family to work conflict tend to be able to manage these problems more easily and that study also identified that psychological contract and organizational support as two important moderators that can enhance expatriate adjustment and success. Similarly, an individual with more organizational support and colleague support would show greater expatriate ad-

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justment when cultural adjustment is emphasized by the organization or colleagues and associated with added value. Accordingly, the following hypothesis is proposed in this study.

H2: Social Support has significant and positive effects on Expatriate Adjustment.

Mediating Effect of Expatriate Adjustment

In above statements, it is proposed that social support would influence expatriate adjustment and job performance. This study aims to explore the effect of expatriate adjustment on job performance and the mediating effect of expatriate adjustment on the relationship between social support and job performance. Kraimer, Wayne & Jaworski (2001) stressed that the promotion of expatriate adjustment relied on social support, including support from companies, host countries, the exchange relationships between superiors and subordinates, as well as the family. The results revealed that support from the host country and the exchange relationships between superiors and subordinates had significant effects on expatriates and their job performance. Liu, Yu & Huang (2007) discussed the effects of social support on adjustment from the viewpoint of organizations. Regarding social support as the antecedent of expatriate adjustment, the relationships among social support, expatriate adjustment, and job performance were discussed. The findings showed 1) the more social support, the better foreign workers' expatriate adjustment and job performance, 2) the better expatriate adjustment, the greater foreign workers' job performance, and 3) partial mediating effects of the expatriate adjustment of foreign workers' on the relationship between social support and job performance.

Similarly, solving the expatriate adjustment problem is the foremost thing to do if expatriates have to have performance on working abroad. Thus, job performance can meet the expectations of quantity and quality standards, continue to the end of an expatriate's tasks, develop and establish the capabilities of social connections, mediate the stress to effectively perform tasks, and take a positive attitude towards the assigned job. Consequently, personnel with favorable expatriate adjustment could better overcome the pressure caused by psychological uncertainty in the expatriate process, and this can then induce better job performance. Accordingly, the following hypotheses are proposed in this study.

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H3: Expatriate Adjustment has significant and positive effects on Job Performance.

H4: Expatriate Adjustment has mediating effects on the relationship between Social Support and Job Performance.

Moderating effect of Cultural distance

Chou & Tsui (2012) found that the expatriates' cultural distance had a significantly positive moderating effect on general adjustment. Cultural differences appeared in things such as attitudes towards language, customs, and even time. Chen (2002) examined the management system of the parent company and subsidiary company of multinational enterprises, and found that a smaller cultural distance revealing more similar values and norms could reduce the barriers of the policies and practices established by the parent company, so as to enable the smooth operation of the management system.

In sum, cultural distance would determine the interpersonal interactions. It occurs with regard to differences in languages, races, and social norms between countries, and these differences result in cultural distance. This study observes that differences in language, race, and social norms have moderating effects on

expatriates. It is therefore proposed that cultural distance has moderating effects on social support, expatriate adjustment, and job performance. The following hypotheses are thus proposed in this study.

H5: Cultural distance has moderating effects on the positive relationship between Social Support and Job Performance.

H6: Cultural distance has moderating effects on the positive relationship between Social Support and Expatriate Adjustment.

H7: Cultural distance has moderating effects on the positive relationship between Expatriate Adjustment and Job Performance.

Relationship between Social Support and Organizational Commitment

With special agents as the research subject, Chen (2010) delved into the organizational commitment in secret service organizations to discuss the impacts of career commitment, work stress, and social support on organizational commitment. It was found that special agents' social support had very positive effects on organizational commitment, i.e. the higher the social support, the greater the organizational commitment. Chou, Chang, Liu & Guo (2011) inves-

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tigated nurses' WFC, social support, and organizational commitment. The findings showed the importance of these factors, and thus proposed that nursing managers should pay more attention to reducing WFC and support nurses in order to promote their organizational commitment.

Accordingly, social support has effects on personal behaviors and mental states in many societies and organizations. Researchers have attempted to discuss social support from different angles, including the sources of social support, functions of social support, and personal cognition of social support. In these studies, social support is proved to have significant effects on individuals and could help them reduce the influence of stress on mental health, improve personal job performance, and enhance personal organizational commitment. For this reason, an organization has to understand the effects of social support on individuals and attempt to provide expatriates with the support required to reduce the influence of work stress on mental health, and effectively enhance organizational commitment. As a result, the following hypothesis is proposed in this study.

H8: Social Support has significant and positive effects on Organizational Commitment

Mediating Effect of Organizational Commitment

Nguyen et al. (2015) stated that the expatriate commitment of the parent company could potentially become the dominant force in the degree of commitment the expatriate feil towards their work, as it appeared to have a greater association with and effect on family culture. A stronger commitment to the parent company meant that the expatriate's retention depended less on the commitment to local businesses. With a strong commitment to the parent company, a greater intention to stay with the firm would be presented, even though the commitment to local businesses was low. The results confirmed that all the components (affective, normative and continual) of parent company commitment and local operation commitment positively predicted retention in international assignments. However, expatriate retention was driven more by the level of parent company commitment. Besides, the relationships between two components (affective and continual) of local operation commitment and retention were moderated by the corresponding components of parent company commitment. These findings improved our understanding of dual commitment's links to work behaviors in international business contexts.

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Expatriates often encounter dilemmas as they have to follow the development of local units and monitor local work. If they face a heavy work burden, expatriates with a lack of organizational identification or coherence often consider leaving their jobs, thus increasing turnover intention and creating negative effects on job performance. Therefore, organizational commitment is regarded as a key factor in job performance in this study. Accordingly, the following hypotheses are proposed.

H9: Organizational Commitment has significant and positive effects on Job Performance

H10: Organizational Commitment has mediating effects on the relationship between Social Support and Job Performance

Moderating effect of FWC

People need to work to support their families, but FWC can have negative effects, both physiologically and psychologically, which then further reduces work productivity and job satisfaction and decreases organizational commitment (Greenhaus & Beutell, 1985; Higgins, Duxbury & Irving, 1992). Kim, Lee, Park, & Yun(2015) discovered that supervisor support was the strongest function in the relationship

among WIF, FIW, and knowledge share when WIF was low and FIW was high. Rudolph, Michel, Harari, &Stout (2014) found a significantly positive relationship between perceived organizational social support and perceived supervisor social support, a significant negative relationship between perceived organizational social support and FWC, and a significant negative relationship between perceived supervisor social support and FWC.

Accordingly, regardless of the definition of FWC, such conflict would appear to have negative effects on an employee's personal life or work. The following hypotheses are thus proposed in this study.

H11: FWC moderates the positive relationship between Social Support and Job Performance

H12: FWC moderates the positive relationship between Social Support and Organizational Commitment

H13: FWC moderates the positive relationship between Organizational Commitment and Job Performance
According to the literature, social support would affect job performance, social support would affect expatriate adjustment, expatriate adjustment could affect job performance, social support

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would affect organizational commitment, and organizational commitment could affect job performance. Cultural distance and FWC could have moderating effects on the relationships among social support, expatriate adjustment and job performance. Figure 1 shows the research frame work proposed in this study.
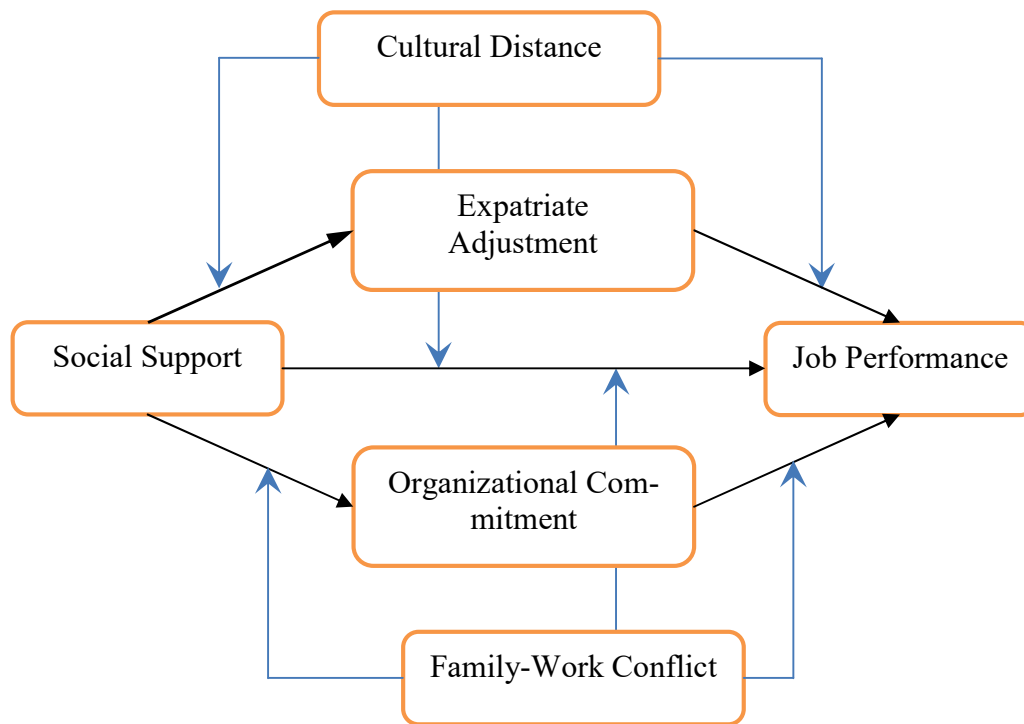

Figure 1. Research Framework

Methodology, Variable Measurement and Questionnaire Development

This study develops a survey questionnaire to obtain responses from Taiwanese expatriates in banking industry about their Social Support, Expatriate Adjustment, Cultural distance, Organizational Commitment, FWC and Job Performance. These question items are presented in six parts, namely Social Support (16 items), Expatriate Adjustment (11 items), Organizational Commitment (23 items) and Job Performance (6 items). In addition, the moderating variables are Cultural distance (6 items) and FWC (5 items). All of them are tested to ensure the reliability and validity of the design. The results suggest that the measurement scales are reliable and thus suitable for being adopted in this study.

1. Social Support - The items for Social Support are adopted and modified from

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Chen, Huang & Du (2010), aiming to test the effects of Social Support on Expatriates of Taiwan's banking industry.

2. Expatriate Adjustment - The items for Expatriate Adjustment are derived and modified from Huang, Chung, Weng & Chang (2005), aiming to test the effects of Expatriate Adjustment on Expatriates of Taiwan's banking industry.

3. Organizational Commitment - The items for Organizational Commitment are adopted and modified from Lee, Chung & Lin (2000), aiming to test the effects of Organizational Commitment on Expatriates of Taiwan's banking industry.

4. Job Performance - The items for Job Performance are derived and modified from Qomariyah & Wu (2013), aiming to test the effects of Job Performance on Expatriates of Taiwan's banking industry.

5. Cultural distance - The items for Cultural distance in this study are adopted and modified from Hofstede (2001), aiming to test the effects of Cultural distance on Expatriates of Taiwan's banking industry.

6. FWC - The items for FWC are derived and modified from Lu (2015), aiming to test the effects of FWC on Expatriates of Taiwan's banking industry.

Sampling Design

Data are collected through an online questionnaire survey. There are 21 banks in Taiwan with expatiates, and these employees are purposively stratified and selected as the sampling subject.

First of all, the authors search the list of banks in Taiwan from the website of the Ministry of Finance, Taiwan, R.O.C. Then, letters to the Human Resource Managers are written to invite the banks' expatriates to participate in this study. They are promised that their answers would be treated with strict confidentiality and no individual information will be leaked out.

Data Analysis

The retrieved questionnaires are analyzed to test the hypotheses using SPSS18.0, including descriptive statistics, validity analysis, reliability analysis and (hierarchy) regression analysis. Empirical Analysis of Research

The data in this study are collected using online questionnaire survey. A total of 150 copies are distributed, and 116 valid responses are retrieved, with an effective retrieval rate 77.3%.

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Analysis of Descriptive Statistics

Regarding the basic features of the sample, 66 respondents are male, about 57%; 46 respondents are aged 41-50, about 40%; 84 respondents are married, about 72%; 54 respondents are graduated from university, about 47%; 52 respondents have worked for more than 16 years, about 45%; 64 respondents have been an expatriate for less than two years, about 55%; and 36 respondents have an average annual income below $33,000, about 31%, Table 1.

(Editor's Note: Please see all Tables at the end of this article.)

Reliability and Validity Analysis

The results reveal that the reliability of social support, job performance, expatriate adjustment, and cultural distance in the survey reaches or exceeds 0.8, showing the stability and consistency of the questionnaire, Table 2. With regard to internal validity, Nunnally (1978) suggested estimating the internal validity coefficient with the square root of reliability. The results show the internal validity of social support, job performance, expatriate adjustment, and cultural distance in the instrument ranging from 0.87 to 0.92, revealing the abilities of the questionnaire to reflect

these features and make predictions about them, Table 2.

Regression Analysis

1. Effects of Social Support on Job Performance

From Table 3, social support has a significant and positive effect on job

performance, $\beta=0.498$ and $p=0.000$. Hypothesis 1 is thus supported.

2. Effects of Social Support on Expatriate Adjustment

Social support does not have a significant and positive effect on expatriate adjustment, $\beta=0.084$ and $p=0.409$, Table 4. Hypothesis 2 is thus not supported.

3. Effects of Expatriate Adjustment on Job Performance

Expatriate adjustment has significant and positive effects on job performance, $\beta=0.293$ and $p=0.000$, Table 5. Hypothesis 3 is thus supported.

4. Effects of Social Support on Organizational Commitment

From Table 6, social support has significant and positive effects on organ-

izational commitment, β=0.685 and p=0.000. Hypothesis 8 is thus supported.

5. Effects of Organizational Commitment on Job Performance

From Table 7, organizational commitment has significant and positive effects on job performance, β=0.685 and p=0.000. Hypothesis 9 is therefore supported.

6. Mediating effect of Expatriate Adjustment

According to Baron & Kenny's (1986) analysis of mediators and moderators, Multiple Regression and Path Analysis could be applied to verify the existence of mediating effects. Baron and Kenny indicated that a mediating effect was supported when steps 1~3 reached the significance and there was no mediating effect when one or more steps did not achieve the significance. The regression in this study using independent variables to predict the mediator in step 2, i.e. H2, indicates that the mediating effects does not exist, so Hypothesis 4 is not supported.

7. Mediating effect of Organizational Commitment

From Table 8, social support is the independent variable and organizational commitment is the dependent variable in the first regression model. The results show R^2=0.425 (F=71.083), and thus social support could explain 42.5% of the variance of organizational commitment. The standardized coefficient (β) is 0.652, achieving the significance (p=0.000), and thus social support shows positive effects on organizational commitment. Social support is the independent variable and job performance is the dependent variable in the second regression model. The results are R^2=0.302 (F=41.582), and thus social support could explain 30.2% of the variance of job performance. The standardized coefficient (β) is 0.550, reaching the significance (p=0.000), and thus social support presents positive effects on job performance.

Social support and organizational commitment are the independent variables and job performance is the dependent variable in the third model. The results explain that the variance (ΔR^2) increases 0.482 (F = 46.127, p = 0.000), achieving the significance. The standardized coefficient (β) of social support with regard to organizational commitment appears 0.299 (p=0.001), reaching the significance. Hypothesis 10 is thus supported.

8. Moderating effects of Cultural distance

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(1) Moderating effects of cultural distance on the relationship between social support and job performance

The interaction between social support and cultural distance with regard to job performance is examined using hierarchical regression analysis in this section. From Table 9, after including the interaction between social support and cultural distance in hierarchy 3, the explanatory power of job performance

shows a remarkable increase ($\triangle$

R^2=0.271, 0.274, 0.293) and achieves the significance; The overall regression significance test F also shows the significance (F=16.885) so that Hypothesis 5 is supported.

(2) Moderating effects of cultural distance on the relationship between social support and expatriate adjustment

The interaction between social support and cultural distance with regard to expatriate adjustment is examined using hierarchical regression analysis in this section. From Table 10, after including the interaction between social support and cultural distance in hierarchy 3, the explanatory power of expatriate adjustment shows a notable increase ($\triangle R^2$=-

0.003, 0.128, 0.174) and reaches the significance. The overall regression signifi-

cance test F also shows the significance (F=9.103), and thus Hypothesis 6 is supported.

(3) Moderating effects of cultural distance on the relationship between expatriate adjustment and job performance

The interaction between expatriate adjustment and cultural distance with regard to job performance is examined using hierarchical regression analysis in this section. From Table 11, the explanatory power of job performance shows a

remarkable increase ($\triangle R^2$=0.107, 0.099,

0.221) and reaches the significance after including the interaction between expatriate adjustment and cultural distance in hierarchy 3. The overall regression significance test F shows the significance (F=11.863), and so Hypothesis 7 is supported.

9. Moderating effects of FWC

(1) Moderating effects of FWC on the relationship between social support and job performance

The interaction between social support and FWC towards job performance is also examined using hierarchical regression analysis. From Table 12, after including the interaction between social support and FWC in hierarchy 3, the ex-

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planatory power of job performance shows a remarkable increase ($\triangle R^2$=0.271, 0.268, 0.295) and achieves the significance. The overall regression significance test F also shows the significance (F=17.065), and thus Hypothesis 11 is supported.

(2) Moderating effects of FWC on the relationship between social support and organizational commitment

The interaction between social support and FWC with regard to organizational commitment is examined using hierarchical regression analysis. From Table 13, after including the interaction between social support and FWC in hierarchy 3, the explanatory power of organizational commitment shows a notable increase ($\triangle R^2$=-0.442, 0.447, 0.493) and reaches the significance. The overall regression significance test F also shows the significance (F=38.327). As such, Hypothesis 12 is supported.

(3) Moderating effects of FWC on the relationship between organizational commitment and job performance

The interaction between organizational commitment and FWC with regard to job performance is examined using hierarchical regression analysis.

From Table 14, the explanatory power of job performance shows a remarkable increase ($\triangle R^2$=0.315, 0.312, 0.405) and reaches the significance after including the interaction between organizational commitment and FWC in hierarchy 3. The overall regression significance test F also shows the significance (F=27.143). Hypothesis 13 is thus supported.

Conclusions, Implications and Suggestions

Based on a questionnaire survey, data collection and statistical analysis, the study finds that social support gave to bank expatriates in Taiwanese banks significantly affects their job performance. Social support significantly affects their organizational commitment, and organizational commitment and expatriate adjustment also significantly affect their job performance. The research results reveal the significantly positive effects of social support on organizational commitment, revealing that social support would actually have an impact on expatriates' organizational commitment. The results once again show that social support can have significant effects and could help reduce the influence of stress on mental health, improve personal job performance, and enhance personal organizational commitment.

The results of this research suggest that the use of discriminatory policies in a host country would reduce expatriate commitment when cultural distance is high, and the expatriate would thus see reduced task performance and may even return to the parent company earlier that expatriates with less cultural distance would have better expatriate adjustment.

In addition, in its validation of the mediating effect of organizational commitment, this study finds that organizational commitment has some mediating effects on job performance, but expatriate adjustment does not have significant mediate the relationship between social support and job performance. The results of this research, the findings show that a high degree of organizational commitment has a positive influence on job performance and the achievement of organizational goals and can be used for predicting the employee performance. As a result, this study holds that multinational companies should strengthen the contacts between expatriates and their parent company, because organization commitment towards parent company might possess the potential to become a leading force, because it better connects with and embeds in family culture. Under the situation of strong commitment to parent company, expatriate retention will be decided less by the expatriates' commitment to the local business in a foreign country. So, all composite parts (affective, normative, and continuous) from both parent company commitment and local management commitment positively predict the retention of international assignments.

Finally, this study finds that cultural distance and FWC play a significant moderating role in the research framework. Regarding the management system of the parent company and subsidiary company of multinational enterprises, it is found that a smaller cultural distance revealing more similar value and norms could reduce the barriers of the policies and practices established by the parent company so as to enable the smooth operation of the management system. So cultural distance would determine the interpersonal interactions. It occurs with regard to the differences in languages, races, and social norms between countries, and these differences result in cultural distance. Therefore, this study holds that multinational companies should promote cross-cultural trainings (CCT) before dispatching their expatriates. Only with perfect CCT can they help their employees perceive the differences among different cultures, which in turn can boost their abilities to get along with coworkers from different countries. When they make progress in cross-cultural adaptation, they will also see the decrease in cultural distance and

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thus upgrade their expatriate job performance accordingly.

It is also found in this study that FWC has moderating effects on the relationships between social support and job performance, social support and organizational commitment, and organizational commitment and job performance. FWC would have negative physiological and psychological effects, including threats to personal physical health, feelings of depression and not being competent in one's parental role, reducing satisfaction with family, marriage, and life, as well as declining work productivity and job satisfaction, thus further affect-

ing organizational commitment. In addition, this study holds that, besides intensifying cross-cultural trainings before dispatching their expatriates, multinational companies should also single out the expatriates' family members to give them proper and timely assistance regarding the issue of cross-cultural adaptability, so that they can have a better understanding of the expatriate workload and contents and then be given due support. Thus, the expatriates, because of no worriment of back-up problems, will boost their organizational commitment and job performance in the field missions.

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Table 1. Basic Data of the Research Sample

Item	Question	Times distribution (person)	Percentage distribution (%)
Gender	Male	66	56.9
	Female	50	43.1
Age	21-30	8	6.9
	31-40	28	24.1
	41-50	46	39.7
	Above 51	34	29.3
Marital status	Married	84	72.4
	Single	28	24.1
	Others	4	3.4
Educational attainment	Under junior high /vocational school	2	1.7
	College	10	8.6
	University	54	46.6
	Above graduate school	50	43.1
Years of work	Below 5 years	16	13.8
	5-10 years	28	24.1
	11-15 years	20	17.2
	Above 16 years	52	44.8
Years of expatriate	Below 2 years	64	55.2%
	2-4 years	42	36.2%
	Above 5 years	10	8.6%
Annual income	Below $33,000	36	31.1%
	$33,001-$48,500	26	22.4%
	$48,501-$66,000	26	22.4%
	Above $66,001	28	24.1%

Table 2. Reliability and Validity Analysis of this research scale

Dimension	Cronbach's α
Social Support	0.918
Job Performance	0.885
Expatriate Adjustment	0.937
Cultural Distance	0.876
Organizational Commitment	0.945
Family-Work Conflict	0.903

Data source: organized in this study

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Table 3. Regression analysis of social support and job performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	p
		β	Std. Error	Beta		
1	(Constant)	2.610	.359		7.263***	.000
	Social Support	.498	.075	.527	6.617***	.000
a. Dependent Variable: Job Performance						

Coefficient [a]

$p< 0.001$

Table 4. Regression analysis of social support and expatriate adjustment

Model		Unstandardized Coefficients		Standardized Coefficients	t	p
		β	Std. Error	Beta		
1	(Constant)	4.005	.486		8.234***	.000
	Social Support	.084	.102	.077	.829	.409
a. Dependent Variable: Expatriate Adjustment						

Coefficient [a]

*** $p< 0.001$

Table 5. Regression analysis of expatriate adjustment and job performance

Coefficient [a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	β	Std. Error	Beta		
1 (Constant)	3.675	.341		10.787***	.000
Expatriate Adjustment	.293	.076	.338	3.837***	.000
a. Dependent Variable: Job Performance					

*** $p < 0.001$

Table 6. Regression analysis of social support on organizational commitment

Coefficient [a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	β	Std. Error	Beta		
1 (Constant)	1.641	.403		4.075***	.000
Social Support	.685	.081	.652	8.431***	.000
a. Dependent Variable: Organizational Commitment					

*** $p < 0.001$

Table 7. Regression analysis of organizational commitment on job performance

Coefficient [a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	β	Std. Error	Beta		
1 (Constant)	1.641	.403		4.075***	.000
Organizational Commitment	.685	.081	.652	8.431***	.000
a. Dependent Variable: Job Performance					

*** $p < 0.001$

Table 8. Analysis of mediating effect of organizational commitment on the relationship between social support and job performance

Independent variable	Dependent variable		
	Organizational Commitment	Job Performance	
	Model 1	Model 2	Model 3
Social Support	.652***	.550***	.299**
Organizational Commitment			.503***
F	71.083	41.582	46.127
R^2	.425	.302	.493
ΔR^2	.419	.482	.482

*** $p< 0.001$

Table 9. Moderating effects of the interaction between social support and cultural distance on job performance

Explained variable	Job Performance		Job Performance		Job Performance	
	β	t	β	t	β	t
Social Support	.498	6.617***	.494	6.560***	.557	6.891***
Cultural distance			.066	1.228	.082	1.526
Social Support * Cultural distance					-.128	-1.992*
R^2	.278		.287		.311	
Adjusted ΔR^2	.271		.274		.293	
F	43.788***		22.746***		16.885***	

* $p< 0.05$, *** $p< 0.001$

Table 10. Moderating effects of the interaction between social support and cultural
distance on expatriate adjustment

Explained variable	Expatriate Adjustment		Expatriate Adjustment		Expatriate Adjustment	
	β	t	β	t	β	t
Social Support	.084	.829	.064	.670	.172	1.706
Cultural distance			.290	4.257***	.317	4.728***
Social Support * Cultural distance					-.217	-2.709**
R^2	.006		.143		.196	
Adjusted $\triangle R^2$	-.003		.128		.174	
F	.687		9.456***		9.103***	

** $p< 0.01$, *** $p< 0.001$

Table 11. Moderating effects of the interaction between expatriate adjustment and
cultural distance on job performance

Explained variable	Job Performance		Job Performance		Job Performance	
	β	t	β	t	β	t
Expatriate Adjustment	.293	3.837***	.294	3.553**	.284	3.687***
Cultural distance			-.002	-.026	.100	1.551
Expatriate Adjustment * Cultural distance					.210	4.325***
R^2	.114		.114		.241	
Adjusted $\triangle R^2$	.107		.099		.221	
F	14.726***		7.299**		11.863***	

*** $p< 0.001$

Table 12. Moderating effects of the interaction between social support and family-work conflict on job performance

Explained variable	Job Performance		Job Performance		Job Performance	
	β	t	β	t	β	t
Social Support	.527	6.617***	.504	5.817***	.4527	6.164***
Family-Work Conflict			-.060	-.694	-.957	-.671
Social Support * Family-Work Conflict					-.183	-2.325
R^2	.278		.281		.341	
Adjusted $\triangle R^2$	.271		.268		.295	
F	43.788***		22.036***		17.065***	

*** $p < 0.001$

Table 13. Moderating effects of the interaction between social support and family-work conflict on organizational commitment

Explained variable	Organizational Commitment		Organizational Commitment		Organizational Commitment	
	β	t	β	t	β	t
Social Support	.669	9.601***	.628	8.352***	.599	8.266***
Family-Work Conflict			-.104	-1.377	-.107	-1.492
Social Support * Family-Work Conflict					.226	3.381**
R^2	.447		.456		.507	
Adjusted $\triangle R^2$	.442		.447		.493	
F	92.177***		47.399***		38.327***	

** $p < 0.01$, *** $p < 0.001$

Table 14. Moderating effects of the interaction between organizational commitment and family-work conflict on job performance

Explained variable	Job Performance		Job Performance		Job Performance	
	β	t	β	t	β	t
Organizational Commitment	.566	7.333***	.543	6.586***	.605	7.757***
Family-Work Conflict			-.067	-.809	-.039	-.502
Organizational Commitment * Family-Work Conflict					-.316	-4.321***
R^2	.321		.324		.421	
Adjusted $\triangle R^2$	.315		.312		.405	
F	53.778***		27.135***		27.143***	

*** $p< 0.001$
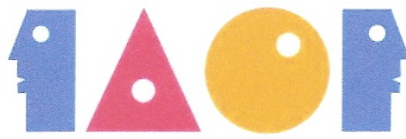
A STUDY OF INNOVATIVE LEISURE SPORTS CONCEPT –
THE INFLUENCE OF TRIATHLON LEISURE FIT AND FLOW
EXPERIENCE ON HAPPINESS: FLOW EXPERIENCE
AS A MEDIATOR

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Abstract

This study aims to explore the influence of triathlon participants' leisure fit and flow experience on happiness. A questionnaire survey on participants in the 2016 Hualien Cup International Triathlon Contest was conducted. Using convenience sampling in the on-site survey, 150 effective samples were obtained. The following insights were discovered: 1. needs-supplies fit has a positive influence on the production of happiness; 2. needs-supplies fit has a positive influence on the production of flow experience; 3. demands-abilities fit has a positive influence on the production of flow experience; 4. flow experience has a positive influence on the production of happiness; and 5. flow experience has a partial mediation effect over "the relations between demands-abilities fit and happiness." It is expected that the findings of this study will serve as a reference for governmental agencies, civil organizations and businesses in the promotion of triathlon.

Keywords**:** Leisure Fit; Flow Experience; Happiness; Triathlon

Introduction

In recent years, the triathlon has become increasingly popular among sports enthusiasts around the world. According to 2013 statistics garnered by the International Triathlon Union (ITU), the number of triathlon participants around the world grew from 1.3 million in 2009 to 2.01 million in 2013, indicat-

ing an upward trend. Among the twenty countries with the highest numbers of triathlon participants, Taiwan was ranked No. 13, with the number of participants reaching 30 thousand (ITU, 2014). These figures show how popular triathlon has become. Triathlon is a competition involving three sports: swimming, cycling and running. It is a demanding endurance competition; con-

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testants have to cope with various distances, environments and switching between sports, as well as adapting to the musculature and cardio-respiratory status after each sport, to be able to achieve outstanding results. In other words, triathlon emphasizes an individual's adaptation to different environments and comprehensive sports skills. As there are more and more triathlon competitions, participants also stress the conditions of environments where competitions are held, including the conditions along swimming routes (such as wave elevation), and traffic control along biking or running routes. Whether or not contestants are able to complete each of the three sports without experiencing dizziness, cramps, or blisters depends on how well they trained. In other words, how to achieve compatibility between the abilities of contestants and the environments of competitions is being emphasized among organizers and contestants of triathlons. In this regard, leisure and recreation fit may serve as a theoretical basis for a discussion on this issue. According to Tsaur, Chang, Cai and Lin (2008), in their research on leisure and recreational activities, they discussed recreationist-environment fit (R-E fit), a relatively innovative concept, which refers to the compatibility of the interaction between recreationists and the recreation environment. When the recreationalists and the environments share similar properties, there will be compatibility in their interactions. In other words, when the environments of triathlon competitions meet the expectations of the participants, who have a certain level of abilities and skills, the participants will not only enjoy the competition, but also fit into the environments, thus obtaining better results or more pleasant experiences.

Part of the pleasure is contributed by the flow experience. According to Jacks and Csikszentmihalyi (1999), flow experience only happens among highly devoted participants. When experiencing flow, athletes feel strong and unafraid. They are able to concentrate and merge their action and awareness, thus completing moves almost effortlessly. Such an experience is often the most pleasant moment athletes can have when doing exercises, so it tends to remain deep in their memories. A flow experience is so pleasant and rewarding that these athletes are constantly trying to achieve that status to gain greater pleasure and achievement. In other words, in addition to appropriate environments, making triathlon participants feel that they are capable of completing the challenges can help them devote their efforts to competitions because it gives them a pleasant experience. Ho (2012), who shares this view, discovered a positive correlation between environment fit and flow experience. Therefore, exploring the correlation between flow experience and triathlon participants from the aspect of environment fit is one of the focuses of this study.

In addition to seeking flow experience, triathlon participants also feel happy about how their training helps them achieve their goals in the competitions, and how they can strike a balance between their abilities/skills and the degree of difficulty of the competitions. Such a positive emotion results in happiness. This viewpoint meets the perspective of Buss (2000), that happiness is a feeling an individual has for a moment or even an entire lifetime when s/he feels that life is meaningful and pleasant because her/his aspirations have been fulfilled. Therefore, this study also focuses on exploring the influence of

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flow experience on happiness. Chang (2011) holds that happiness is an overall feeling an individual has for cognitive, emotional and psychological soundness. While it is a subjective feeling of an individual, it can also be affected by external factors. Therefore, this study also aims to explore the influence of triathlon participants' environment fit on happiness. Based on the aforementioned motives, this study uses the participants in the 2016 Hualien Cup International Triathlon Contest as its subjects to explore the influence of leisure fit and flow experience on happiness, with flow experience as a mediator.

Literature Review

Previously, the concept of fit was mostly used in the research on organizational management (Kristof, 1996; McCulloch & Turban, 2007; Moynihan & Pandey, 2008). It was mainly used to explore if an organization met the needs of an individual (or vice versa), or if the compatibility between the two stemmed from important similarities between them. In other words, when the characteristics of a job match the expectations of an employee, there is a good fit between them. With people becoming increasingly fond of perusing wonderful leisure and recreation experiences, the previous approach of exploring the process of leisure and recreational activities merely through the perspective of recreationists is apparently insufficient. Tsaur, Liang and Lin (2012) were the first to apply the concept of person-environment fit in organizations to the field of recreation, and proposed the concept of recreationist- environment fit (R-E fit), which defines the compatibility between recreationists and recreation environments. According to Tsaur, Liang and Lin (2012), R-E fit includes

similar values shared by recreationists and environment managers, the ability of environments to satisfy the needs of recreationists, and the ability of recreationists to meet the demands of environments. Their theory has made up for the shortcomings of previous studies which neglected environments' demands on recreationists. Based on their viewpoint, how recreationists obtain wonderful experiences depends not only on their own abilities, but also on the relevant environments. Their viewpoint is similar to that of Lu (2012), who believes that environment fit is the result of the interaction between an individual and an environment. There are two key points in Lu's theory: 1. the resources, functions and ideas of an environment are consistent with the expectations of an individual, and 2. the knowledge, experiences and professional abilities of the individual meet the demands of the environment. In the case of this study, leisure environment fit, on the one hand, refers to whether or not a triathlon competition venue is well-organized and well-staffed, and includes routes that are planned by professionals. The software and hardware facilities are the factors affecting participants' evaluation of the competition. On the other hand, it refers to whether or not the participants have a certain level of knowledge and skills demanded by the competition. Only when there is a balance between the two is it possible to improve the so-called leisure fit. In their study on the relations among R-E fit, situational involvement and flow, Tsaur and Ku (2015) put R-E fit into three categories. The first one is supplementary fit, which refers to the compatibility between recreationists and environment managers in terms of the similar values their share. The second one is demands-abilities fit, which means that recreation environments de-

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mand that recreationists should have relevant knowledge, skills and experiences. The last one is needs-supplies fit, which is discussed from two aspects. From the interactions between recreationists and activities, the recreationists' needs include activity attributes, recreation benefits and recreation experiences. From the interaction between recreationists and facilities, the recreationists' needs include natural resources, man-made facilities and recreation benefits. The categorization shows that now R-E fit not only considers personal perception, but also environmental factors, making the theory even more comprehensive. In terms of criteria, Tsaur and Lin (2012) use the six aspects of environment resources, social opportunities, environment functions, environment facilities, knowledge/skills about activities, and management. In other words, they use these six aspects to explore how participants really feel, in order to perfect R-E fit.

Aside from pursuing benefits consistent with personal requirements, people also expect to obtain satisfying experiences and focus on activities through their participation in the activities. According to Csikszentmihalyi (1990), the so-called flow experience is a state of mind. When taking part in a challenging activity that matches their abilities, people experience flow if they are completely devoted and attentive to the activity, pay no heed to events irrelevant to the activity, and complete the activity. In other words, flow experience is an optimal feeling that people will have when there is a balance between their skills and the challenges of the activity. Ghani, Supnick and Rooney (1991) further identify two major features of flow experience, which are that flow experience leads to a sense of enjoyment if people

are completely attentive to an activity, and that the effect of flow experience is to make people value the process instead of the result. Csikszentmihalyi (1997) identifies nine characteristics of flow experience to derive a more accurate evaluation of flow experience: 1. a balance between challenges and skills; 2. clear goals; 3. specific feedbacks; 4. action and awareness are merged; 5. participants completely concentrate at the moment; 6. a sense of control; 7. self-consciousness disappears; 8. the sense of time becomes distorted; and 9. the experience is itself goal-oriented. These nine characteristics show that in terms of balance, flow experience and leisure fit share similar concepts. For example, in leisure fit, the aspect of knowledge and skills related to an activity is similar to the concept of balance between challenges and skills, as well as the sense of control mentioned in flow experience. Besides, in leisure fit, the aspect of resources, functions and facilities of a recreation environment is also similar to the concept of specific feedbacks mentioned in flow experience. Moreover, both leisure fit and flow experience have empirical bases provided by relevant studies (Kuo, 2014; Huang, 2015).

People desire to obtain wonderful life experiences through their engagement in sports or interactions with others. This helps them enhance their sense of self-worth and realize their potential to achieve their goals, thus incurring a sense of happiness. According to Bradshaw, Keung, Rees and Goswami (2011), happiness is a multifaceted concept consisting of emotional and cognitive elements, including: 1. pleasant emotions (positive influence), 2. negative emotions like grief and discontent (negative influence), and 3. evaluation of the quality of personal life (including

satisfaction with life as a whole and about particular aspects of life). In other words, happiness is a relatively subjective individual perception. Chang (2012) shares a similar concept and holds that happiness is an individual's satisfaction about his/her life as a whole and his/her evaluation of the sum of both positive and negative emotions. It covers the aspects of cognitive, emotional, physical and mental well-being, and is a subjective perception based on an individual's free evaluation of relevant evidence. Previous studies hold different theories in terms of their discussions on happiness. Chen (2016) sorted through the relevant literature and proposed the following categorization. First, in need-satisfaction theory, people feel a sense of happiness only when their needs are satisfied. They can also obtain happiness by realizing their goals and participating in the process of realization. Secondly, in personality theory, happiness depends on personal traits or memory network to give rise to different degrees of happy feelings. People with an extroverted personality and positive memory network have a higher degree of happiness; otherwise, they have a lower degree of happiness. Moreover, in judgment theory, happiness is the result of reference and comparison. It means that happiness is obtained based on an individual's values, previous life experiences, and comparison between others' lives and the individual's ideal life. Finally, in dynamic equilibrium theory, happiness is subject to the influence of long-term stable personalities and short-term life events. When there are changes in life, the sense of happiness will change as well. The abovementioned categorization shows the diverse explanations of happiness proposed by different theories. Moreover, previous studies have proven that flow experience has a positive influence on happiness (Chen & Lin, 2011; Chien, 2015), and that leisure fit has a positive influence on happiness (Lee, 2015). Given that there are still insufficient studies on leisure fit, this study uses the participants in the 2016 Hualien Cup International Triathlon Contest as its subjects, in order to explore the relations among leisure fit, flow experience and happiness.

Methodology

Subjects

In this study, the participants in the 2016 Hualien Cup International Triathlon Contest were selected as the subjects. With the adoption of convenience sampling in an on-site survey, the author issued 165 copies of questionnaire and recovered 155 copies, for a 93.9% recovery rate. After excluding five copies with incomplete items, there were 150 valid copies left, constituting a 90.9% valid recovery rate.

Tools

This study adopted a questionnaire survey strategy. The content of the questionnaire is divided into five aspects: "personal information", "needs-supplies fit", "demands-abilities fit", "flow experience" and "happiness." The scales of "needs-supplies fit", "demands-abilities fit" and "flow experience" were modified based on the scales of Tsaur, Liang, Hsu and Lin (2015), whereas the scale of "happiness" was modified based on Lin (2004). The questionnaire was designed by using a five-point Likert-type scale from five for "strongly agree" to one for "strongly disagree." The aspect of demographics includes six items: gender, age, occupation, educational background, average income per month

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and place of residence. The aspect of needs-supplies fit includes eleven items, the aspect of demands-abilities includes nine items, the aspect of flow experience includes nineteen items, and the aspect of happiness includes twenty items.

Structure

Based on its purpose and relevant literature, this study constructed a structure to explore the influence of triathlon leisure fit and flow experience on happiness. The structure is shown in Figure 1.
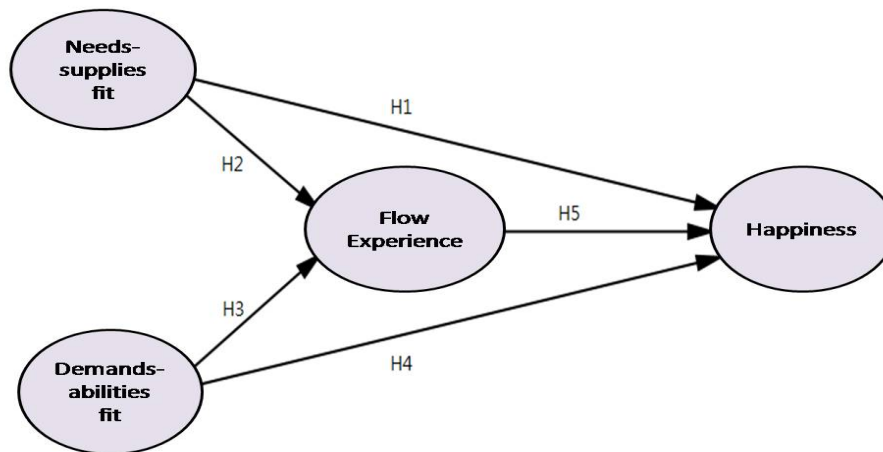

Figure 1. Research Structure

Hypotheses

Based on its purpose and relevant literature, this study proposes the following hypotheses.

H1: Needs-supplies fit has a positive influence on the production of happiness.

H2: Needs-supplies fit has a positive influence on the production of flow experience.

H3: Demands-abilities fit has a positive influence on the production of flow experience.

H4: Demands-abilities fit has a positive influence on the production of happiness.

H5: Flow experience has a positive influence on the production of happiness.

H6: Flow experience has a mediation effect over the relation between needs-supplies fit and happiness.

H7: Flow experience has a mediation effect over the relation between demands- abilities fit and happiness.

Data Analysis

This study first used SPSS 20.0 to conduct a descriptive analysis of the demographic variables. It then used Smart PLS 2.0 to analyze the relations among variables and to verify the rationality of its research model.

Results And Analysis

Analysis of Personal Information

Among the valid samples, in terms of gender, the majority of the subjects are male (110 persons; 73.3%). In terms of age, the majority of them are between 21 to 30 years old (57 persons; 38.0%). In terms of occupation, the majority of them are students (56 persons, 37.3%).

In terms of education background, the majority of them graduated from university/college (96 persons, 64.0%). In terms of average income per month, the majority of them have an income of under (and including) 10,000 NTD (39 persons, 26.0%). Finally, in terms of place of residence, the majority of them live in northern Taiwan (63 persons, 42.0%). Table 1 shows the statistics of the 150 subjects.

Table 1. Statistics on Personal Information

Items	Options	Numbers	Percentage
Gender	Male	110	73.3
	Female	40	26.7
Age	Under (include) 20	22	14.7
	21 to 30	57	38.0
	31 to 40	41	27.3
	41 to 50	22	14.7
	Over (Include) 51	8	5.3
Occupation	Student	56	37.3
	Serviceman/woman, policeman/woman, civil servant, teacher	23	15.3
	Industry, commerce, and service	42	28.0
	Agriculture, forestry, fishery, and husbandry	6	4.0
	Retired	4	2.7
	Other	19	12.7

Educational Background	Junior High School (or below)	6	4.0
	Senior High School/ Vocational High School	18	12.0
	University/ College	96	64.0
	Graduate Institute (or above)	30	20.0
Average Income per Month	Under (include) 10,000 NT$	39	26.0
	10,001 to 20,000 NT$	17	11.3
	20,001 to 30,000 NT$	16	10.7
	30,001 to 40,000 NT$	22	14.7
	40,001 to 50,000 NT$	26	17.3
	50,001 (or more) NT$	30	20.0
Place of Residence	Northern Taiwan	63	42.0
	Central Taiwan	25	16.7
	Southern Taiwan	15	10.0
	Eastern Taiwan	47	31.3

Evaluation of Measurements

Convergent Validity

Convergent validity means that the measurements of multiple variables all lead to the same potential concept. Table 2 shows that the AVE values of all variable are all higher than 0.5, CR values are all higher than 0.6, and factor loadings are all higher than 0.7. Therefore, the model of this study has convergent validity (Fornell and Larcker, 1981).

In terms of indicator reliability, Chin (1998a) points out that the indicator loading should be higher than 0.7. In the aspect of needs-supplies fit in

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this study, the indicator reliability of items 6, 7, 8, 10 and 11 (respectively labeled as a6, a7, a8, a10 and a11) is lower than 0.7. In the aspect of demands-abilities fit, the indicator reliability of items 16, 17, 19 and 20 (respectively labeled as a16, a17, a19 and a20) is lower than 0.7. In the aspect of flow experience, the indicator reliability of items 24, 25 and 26 (respectively labeled as a24, a25 and a26) is lower than 0.7. In the aspect of happiness, items 4, 10, 18, 19 and 20 (respectively labeled as c4, c10, c18, c19 and c20) is lower than 0.7. Therefore, this study removed items with an indicator loading of lower than 0.7, namely a6, a7, a8, a10, a11, a16, a17, a19, a20, a24, a25, a26, c4, c10, c18, c19 and c20.

Table 2. Reliability and Validity

Aspects	Variables	Factor Loading	AVE	Composite Reliability	R Square
Needs-supplies Fit	a1	0.883	0.652	0.918	
	a2	0.856			
	a3	0.818			
	a4	0.750			
	a5	0.778			
	a9	0.760			
Demands-abilities Fit	a12	0.870	0.715	0.925	
	a13	0.886			
	a14	0.860			
	a15	0.857			
	a18	0.748			
Flow Experience	a21	0.738	0.574	0.889	0.427
	a22	0.849			
	a23	0.769			
	a27	0.752			
	a28	0.713			

	a29	0.718			
	c1	0.721			
	c11	0.740			
	c12	0.818			
	c13	0.744			
	c14	0.772			
	c15	0.788			
Happiness	c16	0.813	0.611	0.953	0.226
	c17	0.768			
	c2	0.835			
	c3	0.829			
	c5	0.795			
	c6	0.756			
	c7	0.778			

Discriminant Validity

Discriminant validity tests the degree of discrimination among aspects. The correlation coefficient matrix in Table 3 shows that the square root of the AVE value of a given aspect is apparently greater than the absolute value of correlation coefficient between any two aspects, proving that the scale of this study has discriminant validity.

Linear Relationship Analysis

Linear relationship is usually ana-lyzed with the coefficient of determi-nation (R^2) of regression analysis. If R^2 is greater than 0.67, the model has practical value. If R^2 is around 0.33, the model has moderate explanatory power. If R^2 is around 0.19, the model has weak explanatory power (Chin, 1998b). Table 2 shows that the R^2 of this study is 0.266 and 0.427, meaning that the model has moderate and nearly good explanatory power.

Path Analysis

This study uses the PLS model to examine its hypotheses. Figure 2 shows the results of the examination. Needs-supplies fit → happiness (path coefficient =0.241; T value =2.566), Needs-supplies fit → flow experience (path coefficient =0.203; T value =2.308), demands-abilities fit → flow

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experience (path coefficient =0.496; T value =5.680), demands-abilities fit → happiness (path coefficient =-0.095; T value =0.854), flow experience → happiness (path coefficient =0.371; T value =3.500). It shows that H1, H2, H3 and H5 have a significant positive influence, meaning that the results support the four hypotheses (as shown in Table 4).

Table 4 shows that H1 of this study is valid, which is consistent with the finding of Lee (2015). It means that when the resources, functions and ideas related to an environment meet the expectation of participants, the participants tend to experience happiness through the process. H2 of this study is valid, which is consistent with the finding of Tsaur and Ku (2015). It means that if the venues or facilities of the Hualien Cup International Triathlon Contest could be better equipped, the participants could focus more on exerting their abilities without being affected by other factors. H3 of this study is valid, which is similar to the finding of Huang (2015). H4 of this study is invalid, which is consistent with the finding of Tsaur, Liang, Hsu and Lin (2013). H5 of this study is valid, which is similar to the finding of Chen and Lin (2011). It means that when they were fully devoted to the competition, participants of the Hualien Cup International Triathlon Contest excluded senses irrelevant to the competition and felt a sense of satisfaction by enjoying the competition. H6 of this study is invalid, showing that needs-supplies fit does not have a significant influence on the production of happiness through flow experience. H7 of this study is valid, showing that flow experience has a partial mediation effect. It is similar to the finding of

Hsu (2006). It means that among the participants of the Hualien Cup International Triathlon Contest, those with more knowledge and skills about the competition tended to experience flow during the process, which in turn indirectly affected the degree of happiness they perceived.

This study used the Sobel Test proposed by Sobel (1982) to examine if the indirect effect reaches significance, so as to determine if there is any mediation effect. If the T value is greater than 1.96, there is a mediation effect; if not, there is no mediation effect. If there is a mediation effect, the efficacy of a mediator can be determined through the examination of the relationship between its direct and indirect effects. If both direct and indirect effects show significance, the mediator has a partial mediation effect. If the indirect effect shows significance, whereas the direct effect shows insignificance, the mediator has a complete mediation effect. This study used flow experience as a mediator to explore the influence of needs-supplies fit and demands-abilities fit on happiness, so it examined the mediation effect of flow experience. Table 5 shows that with flow experience as a mediator variable, needs-supplies fit has no mediation effect over happiness ($\beta=0.075$, t-value=1.901), meaning that the result does not support H6. On the contrary, demands-abilities fit has a mediation effect over happiness ($\beta=0.184$, t-value = 2.984), meaning that the result supports H7.

Suggestions and Conclusions

Based on the empirical analyses, this study derives the following conclusions.

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i. H1 of this study is valid, meaning that needs-supplies fit has a significant effect over happiness.

ii. H2 of this study is valid, meaning that needs-supplies fit has a significant effect over flow experience.

iii. H3 of this study is valid, meaning that demands-abilities fit has a significant effect over flow experience.

iv. H4 of this study is invalid, meaning that demands-supplies fit has no significant effect over

happiness.

v. H5 of this study is valid, meaning that flow experience has a significant effect over happiness.

vi. H6 of this study is valid, meaning that flow experience has a mediation effect over the relationship between needs-supplies fit and happiness.

vii. H7 of this study is partially valid, meaning that flow experience has a partial mediation effect over the relationship demands-abilities and happiness.

Table 3. Correlation Coefficient Matrix of All Aspects

	Needs-supplies Fit	Happiness	Flow Experience	Demands-abilities Fit
Needs-supplies Fit	*0.808*			
Happiness	0.377	*0.782*		
Flow Experience	0.547	0.442	*0.757*	
Demands-abilities Fit	0.694	0.308	0.636	*0.845*

Note. The bold figures at the diagonal are the square roots of AVE value.

Table 4. Results of Hypothesis Examination

Hypotheses	Path Coefficients	T-value	Results of Examination
H1 Needs-supplies Fit → Happiness	0.241	2.566	Valid
H2 Needs-supplies Fit → Flow Experience	0.203	2.308	Valid
H3 Demands-abilities Fit → Flow	0.496	5.680	Valid

Experience

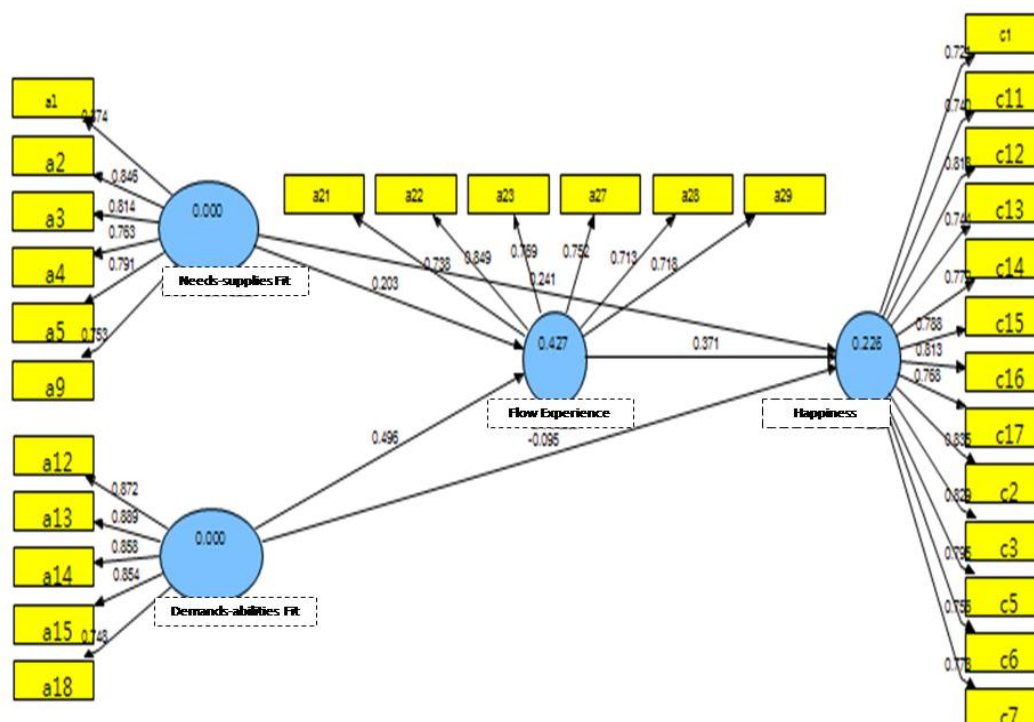|			
H4 Demands-abilities Fit → Happiness	-0.095	0.854	Invalid
H5 Flow Experience → Happiness	0.371	3.500	Valid

Figure 2. Results of Hypothesis Examination

Table 5. Direct Effects, Indirect Effects and Overall Effects of the Model

	Needs-supplies Fit → Flow Experience → Happiness	Demands-abilities Fit → Flow Experience → Happiness
Indirect Effects	0.075	0.184
Direct Effects	0.093	0.104
Overall Effects	0.168	0.288
T Values	1.901	2.984
Results	Without Mediation Effect	With Mediation Effect

Suggestions

Based on its findings, this study proposes the following suggestions:

To Participants of the Hualien Cup International Triathlon Contest

H3 of this study shows that the demands-abilities fit has a significant effect over flow experience. Therefore, it is suggested that participants participate in competitions compatible with their abilities and choose suitable gear, such as waterproof wetsuits that do not entail a sense of tightness around chest, and triathlon bikes fit by experts. It is then suggested that participants design suitable training programs and nutrition aid plans for the race day to improve their physical fitness, including their cardio-respiratory endurance for swimming, and the stability of their hip joints for cycling and running. Participants' experience in competition also helps them to improve their demands-abilities fit. In the case of triathlons, experienced participants will undergo transition training, given that they will experience two transitions to the following sports. Some experienced participants even carry out cross-training among the three sports to improve the strength of their feet. By improving their abilities through the abovementioned suggestions, participants can acquire adequate skills to overcome challenges in the competitions. When there is a balance between challenges and skills, participants will enjoy the competitions, and thus experience flow and obtain happiness.

To Organizer of the Hualien Cup International Triathlon Contest

This study shows that needs-supplies fit has a significant effect on happiness. In other words, when the organizer of the Hualien Cup International Triathlon Contest provides software and hardware facilities that meet the needs of participants, as well as a safe and sound competition environment, it will directly and positively affect the emotions of participants. Therefore, it is suggested that the organizer continue its practice of making the competition the only one of its kind in Taiwan, with all roads and streets along the competition routes closed for traffic control. In so doing, after participants depart from the starting point at the northern pier of Carp Lake, they can fully exert their abilities and enjoy the competition, which consists of 1.5 kilometers of swimming route, 40 kilometers of biking route, and 10 kilometers of running route. It is also suggested that the organizer provide more shelters for the running route along Carp Lake, so that participants will feel more comfortable against the backdrop of the lake view and have greater satisfaction during the competition. The organizer must also understand that in addition to obtaining a sense of achievement at the psychological level, participants are also drawn to natural environments, cultures, and local delicacies in places near the competition venue. Therefore, it is suggested that the organizer work with outstanding lodging providers and restaurants to provide participants with accommodation and dining discounts and complete traffic information. Also, most participants tend to arrive in places near the competition venue a day earlier. For them, the experiences related to accommodation, dining and buying local specialties make it more than just a triathlon competition; rather

it becomes a journey. Hence, if the organizer provides fun events in addition to the engagement of the competition, it will have a stronger positive influence on participants' emotions.

Suggestions for Future Studies

In addition to expanding the application of the leisure fit theory, this study has contributed to the theory by serving as a reference for further studies, thus enriching relevant studies. In terms of practical contribution, this study highlights the fact that in the era of greater awareness of consumer rights, although it is impossible for any competition to be perfectly satisfactory in every aspect, the organizer of a competition can provide more thoughtful services through the perspective of consumers. Hence, the suggestions provided by this study to the organizer of the Hualien Cup International Triathlon Contest can in fact serve as a reference for organizers of other triathlon competitions. In terms of future studies, it is discovered that some participants attend a given competition every year because they like the place where the competition is held. They develop a sense of familiarity related to the place and feel like they are a part of it. Therefore, future studies may

find it worthwhile to explore the influence of leisure fit on place attachment.

Conclusion

With the effort of relevant governmental agencies, many excellent triathlon competitions have been held in places known for their attractive natural sceneries, such as Taitung, Pingtung and Hualien. Many civil organizations like LAVA, IRONMAN TAIWAN and Challenge Taiwan have also organized competitions with different degrees of challenges. Their efforts have helped make triathlon a popular event for sport enthusiasts. In addition to appropriate places and time, the quality of staff, number of aid stations, planning of routes, and traffic control are also factors affecting the reputation of a competition. A well- organized triathlon competition can not only increase the visibility of the organizer and facilitate local tourism, but also offer wonderful experiences and generate positive feelings among the participants. Based on the leisure fit theory, this study explores the influence of leisure fit and flow experience of participants of the Hualien Cup International Triathlon Contest on happiness, and provides suggestions to the participants and organizer based on its findings.

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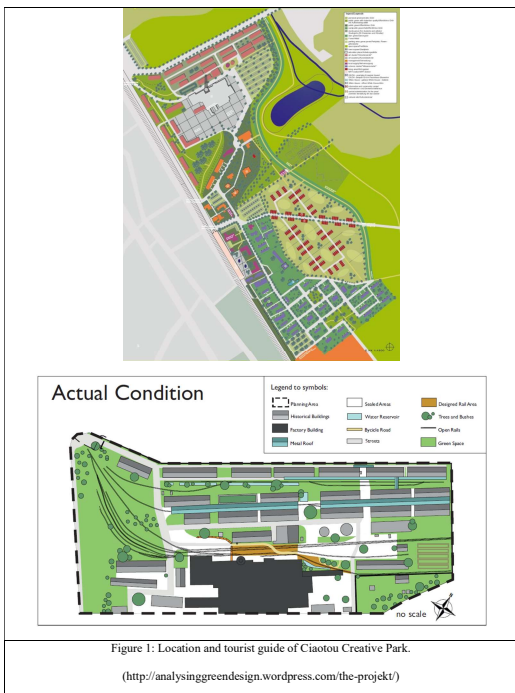
Figure 1: Location and tourist guide of Ciaotou Creative Park.

(http://analysinggreendesign.wordpress.com/the-projekt/)

Railway landscape open space district

Five minute car ride experience

Sugar can field maze

Albizia theatre.

Dorm area

Installation art

Figure 3. Ciaotuo sugar factory area map No.2

Data source：Taiwan Sugar Museum，http://www.tscleisure.com.tw/museum/tour.htm